SCHEME : K

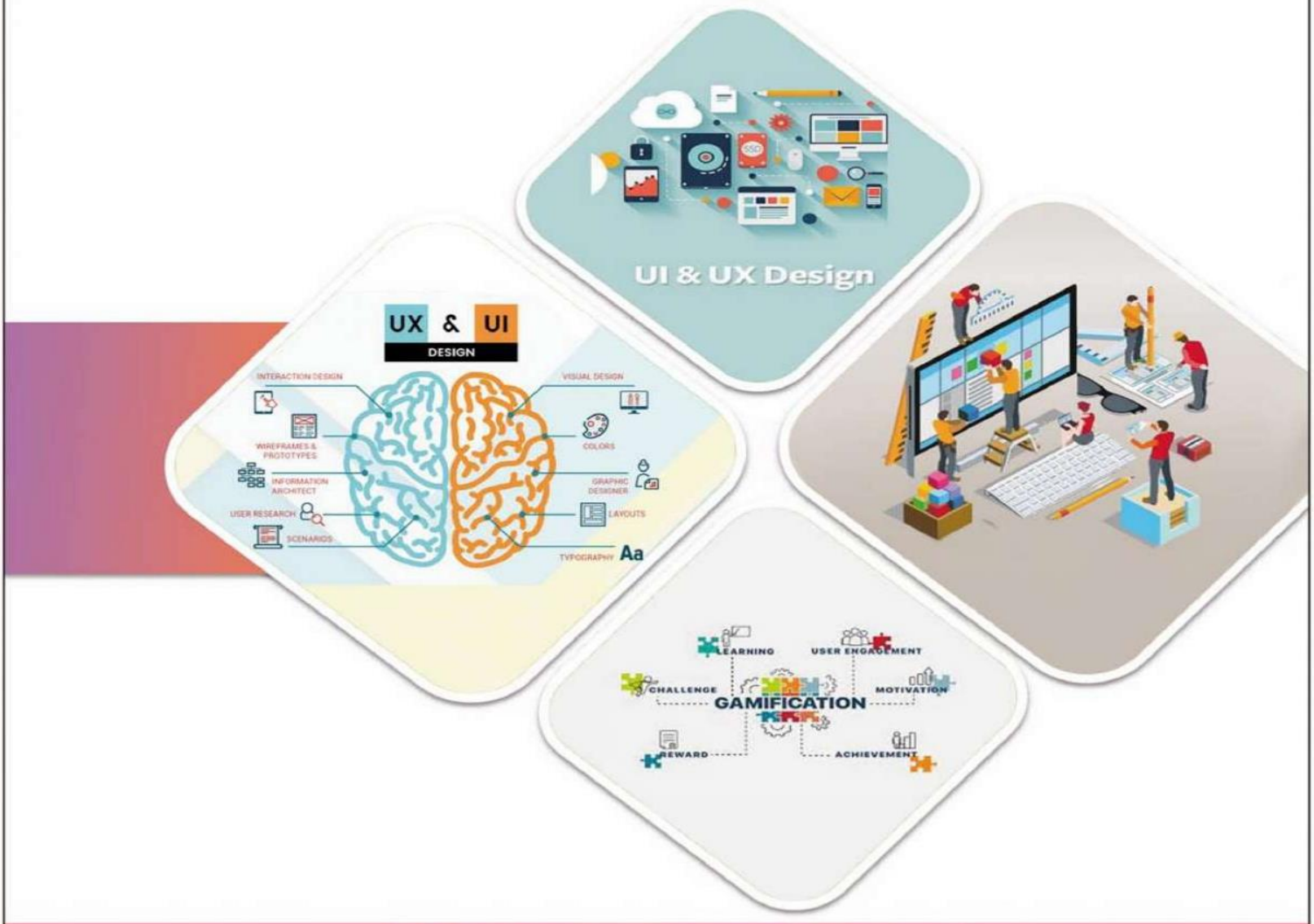
Name : _____

Roll No. : _____ Year : 20___ 20___

Exam Seat No. : _____

LABORATORY MANUAL FOR

UI/UX Design -314005



COMPUTER ENGINEERING GROUP

MAHARASHTRA STATE BOARD OF
TECHNICAL EDUCATION, MUMBAI
(Autonomous) (ISO 9001: 2015) (ISO/IEC 27001:2013)

Vision

To ensure that the Diploma level Technical Education constantly matches the latest requirements of Technology and industry and includes the all-round personal development of students including social concerns and to become globally competitive, technology led organization.

Mission

To provide high quality technical and managerial manpower, information and consultancy services to the industry and community to enable the industry and community to face the challenging technological & environmental challenges.

Quality Policy

We, at MSBTE are committed to offer the best in class academic services to the students and institutes to enhance the delight of industry and society. This will be achieved through continual improvement in management practices adopted in the process of curriculum design, development, implementation, evaluation and monitoring system along with adequate faculty development programmes.

Core Values

MSBTE believes in the following:

- Skill development in line with industry requirements
- Industry readiness and improved employability of Diploma holders
- Synergistic relationship with industry
- Collective and Cooperative development of all stake holders
- Technological interventions in societal development
- Access to uniform quality technical education

A Practical Manual
for

UI/UX DESIGN

(314005)

Semester-IV

Diploma in Engineering and Technology
(AI/ AN/ BD/ CM/ CO/ CW/ DS)

Maharashtra State Board of Technical Education, Mumbai
(Autonomous) (ISO 9001:2015) (ISO/IEC 27001:2013)

'K' Scheme Curriculum

Maharashtra State Board of Technical Education, Mumbai

(Autonomous) (ISO 9001:2015) (ISO/IEC 27001:2013)

4th Floor, Government Polytechnic Building

49, Kherwadi, Bandra (East), Mumbai – 400051

Maharashtra State Board of Technical Education

Certificate

This is to certify that Mr./Ms. …… Roll No…… of the Forth Semester of Diploma in …… Engineering/Technology (Program Code - .....4K) of the Institute …… (Inst. Code……) has completed the practical work satisfactorily for the course UI/UX DESIGN (Course Code: 314005) for the academic year 20….. – 20…..... as prescribed in the curriculum.

Place ……. Enrollment No……

Date: …..... Exam Seat No. …….....

Course Teacher **Head of the Department** **Principal**

Seal of the Institute

Preface

UI/UX DESIGN (314005) laboratory manual is meticulously crafted to equip forth semester diploma engineering students with valuable practical learning experiences aligned with MSBTE 'K' Scheme Curriculum.

The primary objective of this manual is to create a product that is both aesthetically appealing and easy to interact. To achieve this, each practical is mapped with prescribed theory learning outcomes (TLOs), lab learning outcomes (LLOs) and course outcomes (COs). Course facilitators can adopt suitable pedagogical methods to impart the course with an aim to achieve the prescribed course outcomes effectively.

This laboratory manual is designed to help all stakeholders, especially the students, teachers and instructors to develop in the student the pre-determined outcomes. It is expected from each student that at least a day in advance, they have to thoroughly read the concerned practical procedure that they will do the next day and understand minimum theoretical background associated with the practical. Every practical in this manual begins by identifying the competency, industry relevant skills, course outcomes and practical outcomes which serve as a key focal point for doing the practical. Students will then become aware about the skills they will achieve through procedure hown there and necessary precautions to be taken, which will help them to apply in solving real-world problems in their professional life.

This manual also provides guidelines to teachers and instructors to effectively facilitate student-centered lab activities through each practical exercise by arranging and managing necessary resources in order that the students follow the procedures and precautions systematically ensuring the achievement of outcomes in the students.

User Interface design is used to design user-centered applications, websites, interfaces using design tool that is figma tool. This course is designed to elicit fundamental principles and practical skills from stakeholders which are essential to design user friendly interfaces. The course will help students to apply design thinking concepts to create or re-create the prototype.

Program Outcomes (POs) to be achieved through Practical:

PO1	Basic and Discipline specific knowledge: Apply knowledge of basic mathematics, science and engineering fundamentals and engineering specialization to solve the engineering problems.
PO2	Problem analysis: Identify and analyses well-defined engineering problems using codified standard methods.
PO3	Design/ development of solutions: Design solutions for well-defined technical problems and assist with the design of systems components or processes to meet specified needs.
PO4	Engineering Tools, Experimentation and Testing: Apply modern engineering tools and appropriate technique to conduct standard tests and measurements.
PO5	Engineering practices for society, sustainability and environment: Apply appropriate technology in context of society, sustainability, environment and ethical practices.
PO6	Project Management: Use engineering management principles individually, as a team member or a leader to manage projects and effectively communicate about well-defined engineering activities.
PO7	Life-long learning: Ability to analyses individual needs and engage in updating in the context of technological changes.

Practical Course Outcome Matrix

Course Outcomes (COs)

CO1	Explain design thinking concept.
CO2	Interpret user requirements.
CO3	Select appropriate visual design for given problem.
CO4	Create interactions using design tool.
CO5	Create innovative design prototype for given applications.

Sr. No.	Title of the Experiment	CO1	CO2	CO3	CO4	CO5
1	*Use Design tool for user requirement collection and analysis	✓	✓			
2	Use Design tool for user requirement collection and analysis of various interfaces such as kiosks	✓	✓			
3	*Recreate a given user interface using any open source design tool	✓	✓	✓		
4	*Create grid system for the given screen using any design tool			✓	✓	✓
5	*Design given user interface using various components such as auto-layouts in the design tool		✓	✓	✓	✓
6	*Use horizontal scrolling to create pages for given website/ App				✓	
7	*Use vertical scrolling for a given website/ App				✓	
8	Recreate given website for UI design, color, images, interactions, menu			✓	✓	✓
9	*Create navigations for the given website/ App				✓	
10	Design a quiz for given user interface					✓
11	Create any two gamification effects for given user interface in given scenario			✓	✓	
12	Create gamification for task completion in website such as LMS/ retail website/ banking website			✓	✓	✓
13	Create any five micro animations for the given user interface in given scenario			✓	✓	
14	*Create prototyping with different interactions – tab, click, hover, delay. for the given user interface				✓	✓
15	Convert created prototype in HTML page(s)					✓

Guidelines to Teachers

1. Teachers should align the explanation of the topic to teaching learning outcome (TLOs).
2. Refer to laboratory learning outcome (LLOs) for the execution of the practical to focus on the defined objectives.
3. Promote life-long learning by training the students to equip themselves with essential knowledge, skills and attitudes.
4. If required, provide demonstration for the practical emphasizing on the skills that the student should achieve.
5. Teachers should give opportunity to the students for exhibiting their skills after the demonstration.
6. Provide feedback and/or suggestions and share insights to improve effectiveness.
7. Assess students' skill achievement related to COs of each unit.

Instructions for Students

1. 100% attendance is compulsory for all practical sessions.
2. Students must adhere to ethical practices.
3. Plagiarism is strictly prohibited.
4. Students should accomplish the requisites of Teamwork, Collaboration and Group Dynamics during the practical sessions.
5. Students shall attempt to develop related hands on skills and gain confidence.
6. All the students must follow the schedule of practical sessions, complete the assigned work/activity and submit the assignment in stipulated time as instructed by the course teacher.
7. Follow formal attire and maintain personal appearance.

Content Page

List of Practical and Formative Assessment Sheet

Sr. No	Practical Title	Date of Performance	Date of Submission	Assessment Marks (25)	Teacher's Sign	Remark
1	*Use Design tool for user requirement collection and analysis					
2	Use Design tool for user requirement collection and analysis of various interfaces such as kiosks					
3	*Recreate a given user interface using any open source design tool					
4	*Create grid system for the given screen using any design tool					
5	*Design given user interface using various components such as auto-layouts in the design tool					
6	*Use horizontal scrolling to create pages for given website/ App					
7	*Use vertical scrolling for a given website/ App					
8	Recreate given website for UI design, color, images, interactions, menu					
9	*Create navigations for the given website/ App					
10	Design a quiz for given user interface					
11	Create any two gamification effects for given user interface in given scenario					
12	Create gamification for task completion in website such as LMS/ retail website/ banking website					
13	Create any five micro animations for the given user interface in given scenario					

14	*Create prototyping with different interactions – tab, click, hover, delay. for the given user interface					
15	Convert created prototype in HTML page(s)					
				Total		

***Total marks to be transferred to proforma published by MSBTE**

Note:

- '*' Marked Practicals (LLOs) Are mandatory.
- Minimum 80% of above list of lab experiment are to be performed.
- Judicial mix of LLOs are to be performed to achieve desired outcomes.

Practical No. 1: Use Design tool for user requirement collection and analysis

I. Practical Significance

Students will be able to use design tool to collect user requirements and record observation. He / She will achieve skill necessary for the login Figma account. Also the components of the Figma framework.

II. Industry / Employer Expected Outcome(s)

This practical is expected to develop the following skill as:

1. Identify categories of website/ App.
2. Login to Figma account.

III. Course Level Learning Outcome(s)

CO1 - Explain design thinking concept.
CO2 – Interpret user requirements.

IV. Laboratory Learning Outcome(s)

LLO 1.1 Identify categories of website/ App such as government / e-commerce / tourism related etc.
LLO 1.2 Compare different websites/ Apps under one category for design aesthetics.
LLO 1.3 Use design tool to collect user requirements.
LLO 1.4 Record observations using any design tool.

V. Relevant Affective Domain related Outcomes

1. Follow safety measures.
2. Follow ethical practices.

VI. Relevant Theoretical Background

Figma design is for people to create, share, and test designs for websites, mobile apps, and other digital products and experiences. It is a popular tool for designers, product managers, writers and developers and helps anyone involved in the design process contribute, give feedback, and make better decisions, faster.

Procedure to Login Figma account:

There are three different ways to log in to Figma:

- Email address and password
- Google Sign Sign-On
- Third-party identity provider (SAML SSO)

Which option you can use will depend on your original sign up method and your plan. You can use any method to log in to Figma across all applications and devices.

Google SSO

If you have a Gmail address, or work for a company that uses Google Workspaces, you can log in using Google SSO.

1. Head to figma.com or open the Figma desktop app.
2. Click Log in in the top-right corner.
3. Click the Continue with Google button.
4. If you're already logged in to Google, you'll simply be prompted to confirm your details.
5. Otherwise, enter your Google Email or Phone number and click Next.
6. Enter your password and click Next to complete the process.
7. Attend the question otherwise skip it.
8. Then click start for free

VII. Required Resources

Sr. No.	Name of the Resources	Specifications	Qty
1.	Computer system	Processor - 2.9 GHz or equivalents or higher with 10th generation or onwards Operating System - 64 bit RAM - 8GB DDR3 or higher Internet Connectivity	1
2.	Design tool	Figma	1

VIII. Precautions to be followed

1. Handle computer system with care.
2. Check the basic hardware and software requirement.

IX. Conclusion

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X. Practical Related Questions

1. What are the different types of websites.
2. What are the different types of application.
3. Create Figma account and attach successful account opening screenshot of your account.

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XI. References / Suggestions for further Reading

1. https://www.figma.com/login
2. https://www.coursera.org/in/articles/ui-design
3. https://www.claysys.com/blog/types-of-web-applications
4. https://www.geeksforgeeks.org/different-types-of-websites

XII. Assessment Scheme (25 Marks)

S. No.	Weightage- Process related: 60%	Marks-15
1.	Design UI	
2.	Follow ethical practices	
3.	Quality of output achieved(LLO mapped)	
	Weightage- Product related: 40%	**Marks-10**
4.	Completion and submission of practical in time	
5.	Answer to sample questions	
	Total 25	
	Dated Signature of Course Teacher	

Practical No. 2: Use Design tool for user requirement collection and analysis of various interfaces such as kiosks

I. Practical Significance

This practical is useful for students to understand kiosk and design kiosk with navigation.

II. Industry / Employer Expected Outcome(s)

This practical is expected to design kiosk application with navigation.

III. Course Level Learning Outcome(s)

CO1 - Explain design thinking concept.
CO2 – Interpret user requirements.

IV. Laboratory Learning Outcome(s)

LLO 2.1 Observe various interfaces used in kiosk based applications.
LLO 2.2 Prepare affinity mapping of User Requirements using design tools

V. Relevant Affective Domain related Outcomes

1. Follow safety measures.
2. Follow ethical practices.
3. Maintain tools and equipment.

VI. Relevant Theoretical Background

Kiosks :

- A kiosk refers to a small, temporary, stand-alone booth used in high-traffic areas for marketing purposes.
- Kiosks may be manned by one or two individuals or may be electronic.
- These booths are considered to be low-cost marketing strategies that are great alternatives for new, emerging entrepreneurs.
- The different types of kiosks include employment kiosks, foodservice kiosks, healthcare kiosks, Bitcoin kiosks, and photo kiosks.

VII. Required Resources

Sr. No.	Name of the Resources	Specifications	Qty
1.	Computer system	Processor - 2.9 GHz or equivalents or higher with 10th generation or onwards Operating System - 64 bit RAM - 8GB DDR3 or higher Internet Connectivity	1
2.	Design tool	Figma	1

VIII. Precautions to be followed

1. Handle computer system with care.
2. Check the basic hardware and software requirement.

IX. Conclusion

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X. Practical Related Questions

1. Design foodservice kiosks with navigation. (Attach Output)
2. Write steps to apply navigation.
3. List types of Kiosks.

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XI. References / Suggestions for further Reading

1. https://www.figma.com/login
2. https://www.coursera.org/in/articles/ui-design
3. https://youtu.be/esbdyyEvkxw?si=o43VIhI5d8oQdT9K

XII. Assessment Scheme (25 Marks)

S. No.	Weightage- Process related: 60%	Marks-15
6.	Design UI	
7.	Follow ethical practices	
8.	Quality of output achieved(LLO mapped)	
	Weightage- Product related: 40%	**Marks-10**
9.	Completion and submission of practical in time	
10.	Answer to sample questions	
	Total 25	
	Dated Signature of Course Teacher	

Practical No. 3: Recreate a given user interface using any open source design tool

I. Practical Significance

This practical is useful for students to design mobile phone screen by using frame and different shape with text.

II. Industry / Employer Expected Outcome(s)

This practical is expected to design mobile phone screen and understand use of frame, shapes and text.

III. Course Level Learning Outcome(s)

CO1 - Explain design thinking concept.
CO2 - Interpret user requirements.
CO3 - Select appropriate visual design for given problem.

IV. Laboratory Learning Outcome(s)

LLO 3.1 Use any Design tool to create a 'blank project'.
LLO 3.2 Use frame, shape, text of design tool to create screen layout of given user interface.

V. Relevant Affective Domain related Outcomes

1. Follow safety measures.
2. Follow ethical practices.
3. Maintain tools and equipment.

VI. Relevant Theoretical Background

Frames in Figma

In Figma, you can add layers directly to the Canvas. If you're designing for a specific device or screen size, you may want to create a container for your designs. This is where frames come in.

Create frames

Create frames in the canvas using the frame tool. There are a few ways to select the frame tool:

- Use the keyboard shortcuts F or A
- Select the frame tool in the toolbar

Then you can create a variety of frame sizes in the canvas:

- Click in the canvas to create a default frame with 100 x 100 dimensions
- Click and drag in the canvas to create a frame with custom dimensions
- Use the dropdown in the right sidebar to select a frame preset.

1. Choose presets for popular device and assets templates:

- Phone
- Tablet
- Desktop
- Watch
- Paper
- Social Media
- Figma Community

2. Click the arrow to expand the section and select a preset from the list.

Adjust properties of the frame

In the past, it was possible to adjust the properties of child objects when you selected the Frame. Now, you can adjust the properties of the frame itself.

- Select a child object by using the keyboard shortcut: Enter or Return.
- Press the Tab key to select the next sibling.
- Press Shift + Tab to select the previous sibling.
- Press Shift + Enter to select the parent

VII. Required Resources

Sr. No.	Name of the Resources	Specifications	Qty
1.	Computer system	Processor - 2.9 GHz or equivalents or higher with 10th generation or onwards Operating System - 64 bit RAM - 8GB DDR3 or higher Internet Connectivity	1
2.	Design tool	Figma	1

XIII. Precautions to be followed

1. Handle computer system with care.
2. Check the basic hardware and software requirement.

XIV. Conclusion

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XV. Practical Related Questions

1. Design mobile phone screen using design tool. (Attach Output)
2. Write down the Frame properties.
3. List frame preset available in it.

XVI. References / Suggestions for further Reading

1. https://www.figma.com/login
2. https://www.coursera.org/in/articles/ui-design
3. https://youtu.be/esbdyyEvkxw?si=o43VIhI5d8oQdT9K

XVII. Assessment Scheme (25 Marks)

S. No.	Weightage- Process related: 60%	Marks-15
11.	Design UI	
12.	Follow ethical practices	
13.	Quality of output achieved(LLO mapped)	
	Weightage- Product related: 40%	**Marks-10**
14.	Completion and submission of practical in time	
15.	Answer to sample questions	
	Total 25	
	Dated Signature of Course Teacher	

Practical No. 4: Create grid system for the given screen using any design tool

I. Practical Significance

This practical is useful for students to design application with plugin and understand the concepts of plugin.

II. Industry / Employer Expected Outcome(s)

This practical is expected to design application with plugin and layout grid.

III. Course Level Learning Outcome(s)

CO3 - Select appropriate visual design for given problem.
CO4 - Create interactions using design tool.
CO5 - Create innovative design prototype for given applications.

IV. Laboratory Learning Outcome(s)

LLO 4.1 Use frames, images, and colors to design given screen.
LLO 4.2 Explore various plug-ins/ extensions in the design tool.
LLO 4.3 Use different plugins/extensions in design tool.

V. Relevant Affective Domain related Outcomes

1. Follow safety measures.
2. Follow ethical practices.
3. Maintain tools and equipment.

VI. Relevant Theoretical Background

Plugins

Plugins are programs or applications created by the Community that extend the functionality of Figma's editors. Plugins run in files and perform one or more actions. Users and organizations take advantage of plugins to customize their experience and create more efficient workflows.

Layout grids

Layout grids help us to align objects within a frame. They provide visual structure to our designs. They help our designs remain logical and consistent across different platforms and devices.

Layout grids aren't reliant on the pixel grid. This means they aren't dependent on a specific resolution or dimensions.

You can only apply layout grids to frames. This could be a top-level frame, or a frame nested within another frame.

VII. Required Resources

Sr. No.	Name of the Resources	Specifications	Qty
1.	Computer system	Processor - 2.9 GHz or equivalents or higher with 10th generation or onwards Operating System - 64 bit RAM - 8GB DDR3 or higher Internet Connectivity	1
2.	Design tool	Figma	1

VIII. Precautions to be followed

1. Handle computer system with care.
2. Check the basic hardware and software requirement.

IX. Conclusion

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X. Practical Related Questions

1. Design application with plugin using design tool.(Attach Output)
2. Design application using layout grid.(Attach Output)
3. List Best Figma Plugins for Designers.

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XI. References / Suggestions for further Reading

1. https://www.figma.com/login
2. https://www.coursera.org/in/articles/ui-design
3. https://www.youtube.com/watch?v=bw6GpfFLewE

XII. Assessment Scheme (25 Marks)

S. No.	Weightage- Process related: 60%	Marks-15
16.	Design UI	
17.	Follow ethical practices	
18.	Quality of output achieved(LLO mapped)	
	Weightage- Product related: 40%	**Marks-10**
19.	Completion and submission of practical in time	
20.	Answer to sample questions	
	Total 25	
	Dated Signature of Course Teacher	

Practical No. 5: Design given user interface using various components such as auto-layouts in the design tool

I. Practical Significance

This practical is useful for students to design user interface using various components such as auto-layout.

II. Industry / Employer Expected Outcome(s)

This practical is expected to design application with auto layout.

III. Course Level Learning Outcome(s)

CO2 - Interpret user requirements.
CO3 - Select appropriate visual design for given problem.
CO4 - Create interactions using design tool.
CO5 - Create innovative design prototype for given applications.

IV. Laboratory Learning Outcome(s)

LLO 5.1 Use frames, components, auto-layouts to design given screen using Design tool.
LLO 5.2 Create asset using design tool.
LLO 5.3 Create library/repository of created assets in the design tool.

V. Relevant Affective Domain related Outcomes

1. Follow safety measures.
2. Follow ethical practices.
3. Maintain tools and equipment.

VI. Relevant Theoretical Background

Auto layout

Auto layout is a property you can add to frames and components. It lets you create designs that grow to fill or shrink to fit, and reflow as their contents change. This is great when you need to add new layers, accommodate longer text strings, or maintain alignment as your designs evolve.

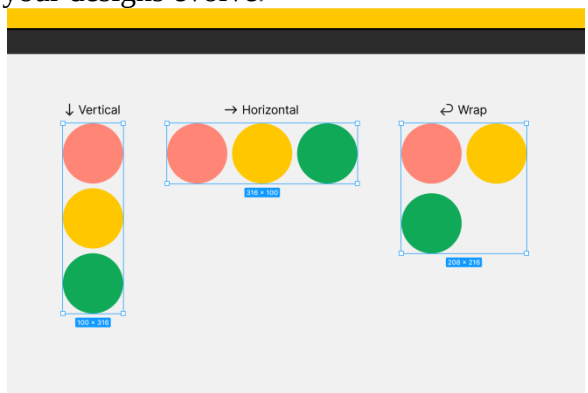

Fig No.5.1 : Layout flow Direction

VII. Required Resources

Sr. No.	Name of the Resources	Specifications	Qty
1.	Computer system	Processor - 2.9 GHz or equivalents or higher with 10th generation or onwards Operating System - 64 bit RAM - 8GB DDR3 or higher Internet Connectivity	1
2.	Design tool	Figma	1

VIII. Precautions to be followed

1. Handle computer system with care.
2. Check the basic hardware and software requirement.

IX. Conclusion

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X. Practical Related Questions

1. Design application using auto-layout.(Attach Output)
2. What is padding in auto layout.
3. Explain Layout flow in figma.

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XI. References / Suggestions for further Reading

1. https://www.figma.com/login
2. https://www.coursera.org/in/articles/ui-design
3. https://help.figma.com/hc/en-us/articles/360040451373-Explore-auto-layout-properties

XII. Assessment Scheme (25 Marks)

S. No.	Weightage- Process related: 60%	Marks-15
21.	Design UI	
22.	Follow ethical practices	
23.	Quality of output achieved(LLO mapped)	
	Weightage- Product related: 40%	**Marks-10**
24.	Completion and submission of practical in time	
25.	Answer to sample questions	
	Total 25	
	Dated Signature of Course Teacher	

Practical No. 6: Use horizontal scrolling to create pages for given website/ App

I. Practical Significance

This practical is useful for students to design application with horizontal scrolling.

II. Industry / Employer Expected Outcome(s)

This practical is expected to design application with horizontal scrolling.

III. Course Level Learning Outcome(s)

CO4 - Create interactions using design tool.

IV. Laboratory Learning Outcome(s)

LLO 6.1 Use horizontal scrolling component in the design tool to create given page(s).

V. Relevant Affective Domain related Outcomes

1. Follow safety measures.
2. Follow ethical practices.
3. Maintain tools and equipment.

VI. Relevant Theoretical Background

Horizontal scrolling

Horizontal scrolling animation made on Figma is an eye-catching way to present your content. It can be used to showcase multiple items in a single-page layout, or to scroll through a list of items. The animation is smooth and seamless, allowing the user to easily scroll left and right. The animation is adjustable, so you can customize the speed, transition, and other elements to create the desired effect. Best of all, the animation is easy to implement and requires no coding.

To apply scroll overflow to a frame:

1. Select a frame.
2. Open the Prototype panel in the right sidebar.
3. In the Scroll behaviour section, select the Overflow dropdown. Choose from:
   - No scrolling
   - Horizontal
   - Vertical
   - Both directions

VII. Required Resources

Sr. No.	Name of the Resources	Specifications	Qty
1.	Computer system	Processor - 2.9 GHz or equivalents or higher with 10th generation or onwards Operating System - 64 bit RAM - 8GB DDR3 or higher Internet Connectivity	1
2.	Design tool	Figma	1

VIII. Precautions to be followed

1. Handle computer system with care.
2. Check the basic hardware and software requirement.

IX. Conclusion

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X. Practical Related Questions

1. Design application using horizontal scrolling.(Attach Output)
2. What is horizontal scrolling.
3. Write steps for horizontal scrolling.

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XI. References / Suggestions for further Reading

1. https://www.figma.com/login
2. https://www.coursera.org/in/articles/ui-design
3. https://www.youtube.com/watch?v=wIPo7vxxchY

XII. Assessment Scheme (25 Marks)

S. No.	Weightage- Process related: 60%	Marks-15
26.	Design UI	
27.	Follow ethical practices	
28.	Quality of output achieved(LLO mapped)	
	Weightage- Product related: 40%	**Marks-10**
29.	Completion and submission of practical in time	
30.	Answer to sample questions	
	Total 25	
	Dated Signature of Course Teacher	

Practical No. 7: Use vertical scrolling for a given website/ App

I. Practical Significance

This practical is useful for students to design application with vertical scrolling.

II. Industry / Employer Expected Outcome(s)

This practical is expected to design application with vertical scrolling.

III. Course Level Learning Outcome(s)

CO4 - Create interactions using design tool.

IV. Laboratory Learning Outcome(s)

LLO 7.1 Use vertical scrolling component in the design tool to create given page(s).

V. Relevant Affective Domain related Outcomes

1. Follow safety measures.
2. Follow ethical practices.
3. Maintain tools and equipment.

VI. Relevant Theoretical Background

Vertical scrolling

Vertical scrolling refers to the action of moving content vertically on a display screen, typically using a mouse, trackpad, or touchscreen. It allows you to view additional content by scrolling down or up the page

To apply scroll overflow to a frame:

1. Select a frame.
2. Open the Prototype panel in the right sidebar.
4. In the Scroll behaviour section, select the Overflow dropdown. Choose from:
   - No scrolling
   - Horizontal
   - Vertical
   - Both directions

VIII. Required Resources

Sr. No.	Name of the Resources	Specifications	Qty
1.	Computer system	Processor - 2.9 GHz or equivalents or higher with 10th generation or onwards Operating System - 64 bit RAM - 8GB DDR3 or higher Internet Connectivity	1
2.	Design tool	Figma	1

IX. Precautions to be followed

1. Handle computer system with care.
2. Check the basic hardware and software requirement.

X. Conclusion

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XI. Practical Related Questions

4. Design application using horizontal scrolling.(Attach Output)
5. What is vertical scrolling.
6. Write steps to apply vertical scrolling.

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XII. References / Suggestions for further Reading

1.https://www.figma.com/login
2.https://www.coursera.org/in/articles/ui-design
3.https://www.youtube.com/watch?v=wIPo7vxxchY

XIII. Assessment Scheme (25 Marks)

S. No.	Weightage- Process related: 60%	Marks-15
31.	Design UI	
32.	Follow ethical practices	
33.	Quality of output achieved(LLO mapped)	
	Weightage- Product related: 40%	**Marks-10**
34.	Completion and submission of practical in time	
35.	Answer to sample questions	
	Total 25	
	Dated Signature of Course Teacher	

Practical No. 8: Recreate given website for UI design, color, images, interactions, menu

I. Practical Significance

Recreating a website is an invaluable exercise for both novice and experienced UI designers, providing a solid foundation for creating effective, aesthetically pleasing, and user-friendly websites. UI design in Figma encompasses color, images, interactions, and menu elements, facilitating the creation of user-friendly digital interfaces.

II. Industry / Employer Expected Outcome(s)

This practical is expected to develop the following skills

1. Design user-centered applications, websites, interfaces.

2. Able to analyze the web page design.

III. Course Level Learning Outcome(s)

CO3 -Select appropriate visual design for given problem minimizing the barriers.

CO4 - Create interactions using design tool.

CO5 - Create innovative design prototype for given applications.

IV. Laboratory Learning Outcome(s)

LLO.8.1 Use frame, shape, text tools, components of the design tool to replicate the design of given web page(s).

LLO.8.2 Use interactions, menus to replicate web page design.

V. Relevant Affective Domain related Outcomes

1. Follow safety practices.

2. Maintain tools and equipment.

3. Follow ethical practices.

VI. Relevant Theoretical Background

By grounding the recreation process in these theoretical frameworks, designers can create websites that are not only visually appealing but also user-friendly, accessible, and effective in meeting their intended goals.

1. UI Design:

- Apply Gestalt principles to organize elements logically and create visual hierarchy. Use proximity, similarity, and continuity to guide the user's focus.

2. Color Theory:

- Apply color theory to choose a harmonious and psychologically appropriate color palette. Ensure sufficient contrast for readability and accessibility.

3. Image:

- Optimize images for performance and accessibility, providing alternative text and ensuring they contribute to the overall design without overwhelming the user.

4. Interactions:

- Design interactions that provide clear feedback and are consistent throughout the website. Use interaction design principles to create intuitive and engaging user experiences.

5. Menu:

- Implement responsive and accessible navigation that aligns with the users' scanning patterns (Z-pattern or F-pattern) and cognitive load principles to ensure ease of use.

VII. Required Resources

Sr. No.	Name of the Resources	Specifications	Qty
1.	Computer system	Processor - 2.9 GHz or equivalents or higher with 10th generation or onwards Operating System - 64 bit RAM - 8GB DDR3 or higher Internet Connectivity	1
2.	Design tool	Figma	1

VIII. Precautions to be followed

1. Handle computer system with care.
2. Check the basic hardware and software requirement

IX. Conclusion

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X. Practical related questions

1. Design a simple homepage for a shopping website using frame, shape, text tools. (Attach Output)
2. Write the properties of a shape?
3. List the shortcuts key efficiently using the shape and text tools in Figma.

4. Write steps for creating frame in figma

XI. References/Suggestions for further reading

1. Designing and Prototyping Interfaces with Figma – Fabio Staiano
2. https://www.figma.com/resource-library/what-is-ui-design/
3. https://help.figma.com/hc/en-us/articles/360041539473-Frames-in-Figma
4. https://www.delasign.com/blog/figma-frame-add-text/

XII. Assessment Scheme (25 Marks)

S. No.	Weightage- Process related: 60%	Marks-15
1.	Design UI	
2.	Follow ethical practices	
3.	Quality of output achieved(LLO mapped)	
	Weightage- Product related: 40%	**Marks-10**
4.	Completion and submission of practical in time	
5.	Answer to sample questions	
	Total 25	
	Dated Signature of Course Teacher	

Practical No. 9: Create navigations for the given website/ App

I. Practical Significance

Website navigation is a collection of user interface components that allows visitors to find content and features on a site. These components can be in the form of copy, link text and buttons, and menus. Creating effective navigations for websites and apps is not only about guiding users from one point to another but also about enhancing user experience, accessibility, engagement, and ultimately driving desired actions and achieving business goals.

II. Industry / Employer Expected Outcome(s)

This practical is expected to develop the following skills

1. Design user-centered applications, websites, interfaces.
2. Able to analyze the web page design.
3. Able to know various menus for the website/App.

III. Course Level Learning Outcome(s)

CO4 - Create interactions using design tool.

IV. Learning Outcome(s)

LLO.9.1 Use various menus - bottom menu, slide menu to demonstrate navigations in the screen.

V. Relevant Affective Domain related Outcomes

1. Follow safety practices.
2. Maintain tools and equipment.
3. Follow ethical practices.

VI. Relevant Theoretical Background

In user interface design, navigation refers to the process of providing users with a way to move between different parts or sections of a digital product, such as a website, app, or software interface. There are two kinds of links you might use for website navigation:

Internal links: Internal links connect to pages within the same website.

External links: These links connect to other websites.

Structure of Website Navigation

Structure of website navigation is very important as it have a greater impact on sales, user include greater level of abstraction. It is not at all easy to design and organize website.

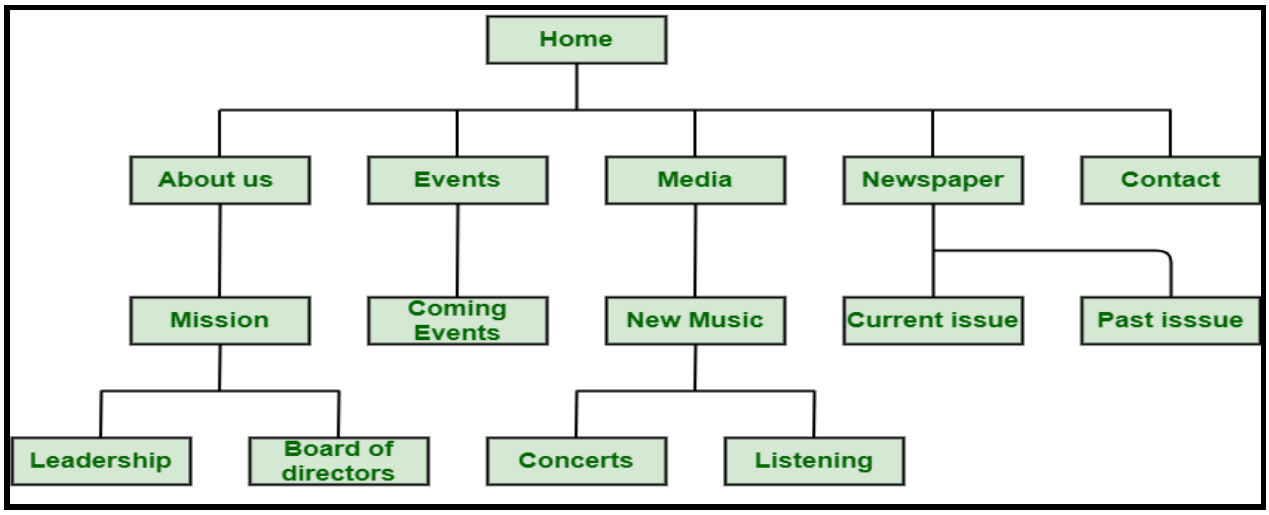

Fig. 9.1 Structure of Website Navigation

In above diagram, about us, events, media, contact, newspaper, etc., are all linked to home menu. To have access to other pages such as mission, coming events, new music, etc., you have to first visit about us, events, media, etc. Then you can open whatever you want to.

Bottom Navigation Menu:

A bottom navigation bar is a user interface element typically located at the bottom of a frame or viewport. It contains navigation options that allow users to move between different sections or screens within an app or website. The bottom navigation bar is commonly used in mobile app design but can also be found in web design for certain types of interfaces.

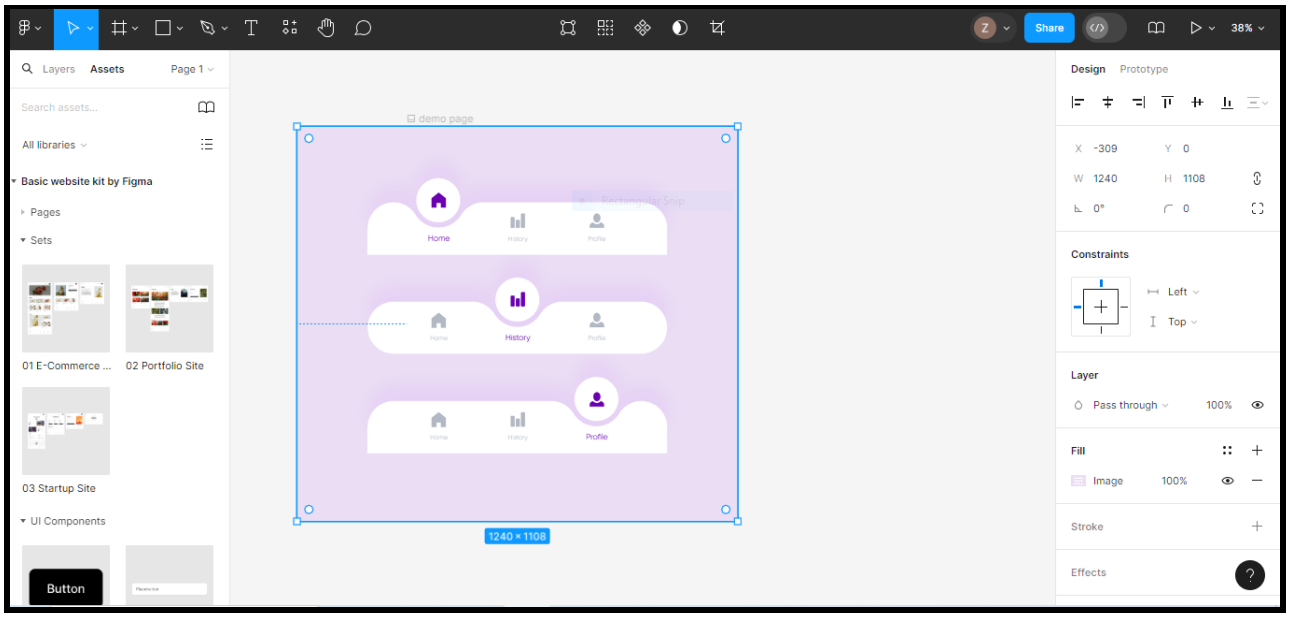

Fig.9.2 Bottom Navigation Menu

Slide menu

Slide menu or Slide out menus are similar and allow for more content to be available to the user without taking up extra space on the screen.

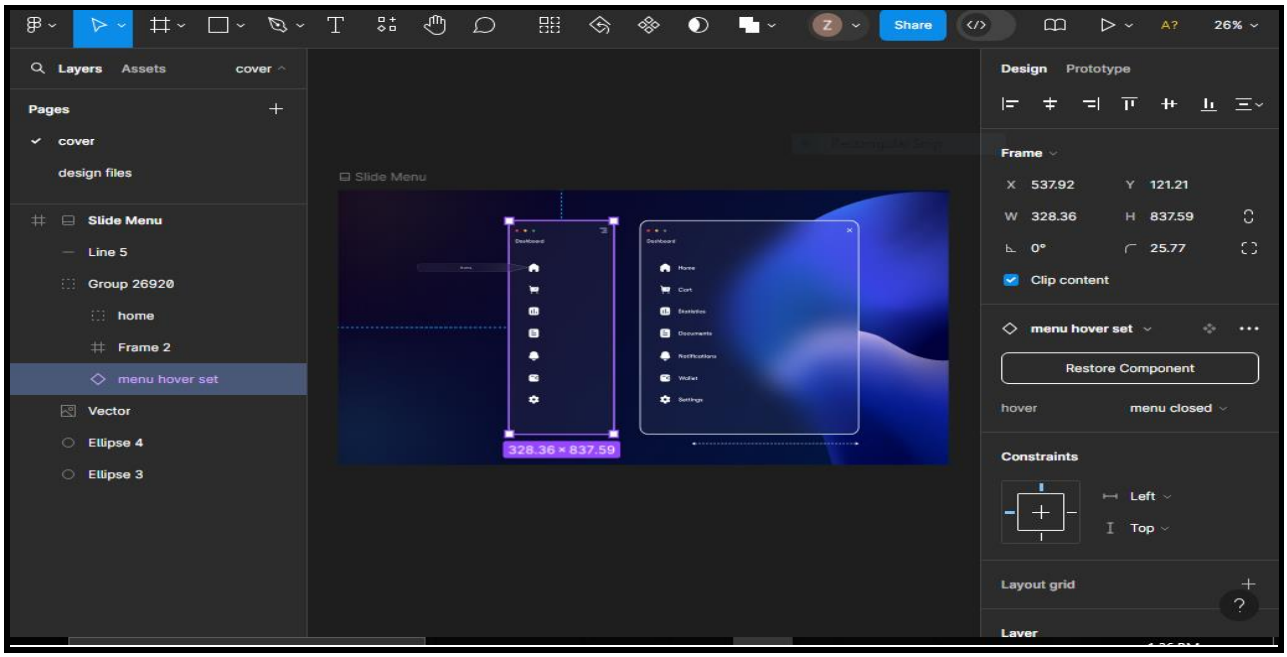

Fig 9.3 Slide menu

VII. Required Resources

S. No.	Weightage- Process related: 60%	Marks-15
1.	Design UI	
2.	Follow ethical practices	
3.	Quality of output achieved(LLO mapped)	
	Weightage- Product related: 40%	**Marks-10**
4.	Completion and submission of practical in time	
5.	Answer to sample questions	
	Total 25	
	Dated Signature of Course Teacher	

VIII. Precautions to be followed

1. Handle computer system with care.
2. Check the basic hardware and software requirement

IX. Conclusion

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X. Practical related questions

1. What is the bottom navigation menu on a website?

2. Designing the navigation system for educational platform on various subjects. (Attach Output)

3. Write steps to create interactions using buttons, navigations design tool.

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XI. References/Suggestions for further reading

1. https://www.geeksforgeeks.org/website-navigation-and-its-importance
2. https://www.w3schools.com/howto/howto_css_bottom_nav.asp
3. https://help.figma.com/hc/en-us/articles/360041539473-Frames-in-Figma
4. https://www.deasign.com/blog/figma-frame-add-text/

XIII. Assessment Scheme (25 Marks)

S. No.	Weightage- Process related: 60%	Marks-15
1.	Design UI	
2.	Follow ethical practices	
3.	Quality of output achieved(LLO mapped)	
	Weightage- Product related: 40%	**Marks-10**
4.	Completion and submission of practical in time	
5.	Answer to sample questions	
	Total 25	
	Dated Signature of Course Teacher	

Practical No. 10: Design a quiz for given user interface

I. **Practical Significance**

Prototyping and testing are integral parts of the design process that allow designers to create interactive prototypes of their designs and gather feedback from stakeholders or users, and iterate on designs based on feedback to create more effective and user-friendly experiences.

II. **Industry / Employer Expected Outcome(s)**

This practical is expected to develop the following skills

1. Design user-centered applications, websites, interfaces.

2. Able to design the web page using wireframing.

III. **Course Level Learning Outcome(s)**

CO5 - Create innovative design prototype for given applications.

IV. **Learning Outcome(s)**

LLO.10.1 Use components and navigations to design quiz like page in design tool.

V. **Relevant Affective Domain related Outcomes**

1. Follow safety practices.

2. Maintain tools and equipment.

3. Follow ethical practices.

VI. Relevant Theoretical Background

Wireframing is a fundamental step in the design process of digital products, serving as a visual representation of the skeletal framework of a user interface. It focuses on outlining the layout, structure, and functionality of a design without incorporating detailed design elements like colors, imagery, or typography. Wireframes provide a clear blueprint for the final design, allowing designers to plan and iterate on the overall user experience before moving into higher-fidelity design stages.

Types of Wireframing:

1. Low-fidelity: Low-fidelity prototypes are rough and basic representations of a design concept. They are usually created quickly and with minimal detail. Low-fidelity prototypes are often hand- drawn sketches or simple wireframes created using software tools.

2. Medium Fidelity: A medium fidelity wireframe is a step up from its low fidelity counterpart. Medium wireframes will have more detail — including accurate spacing, headlines, and buttons.

3**. High Fidelity:** A high fidelity wireframe is a realistic prototype that closely resembles the final design of a project. It can include typography, colors, images, icons, and CTA buttons. These types of wireframes take longer than the low and medium fidelity kind which means more resources are usually allocated to complete them.

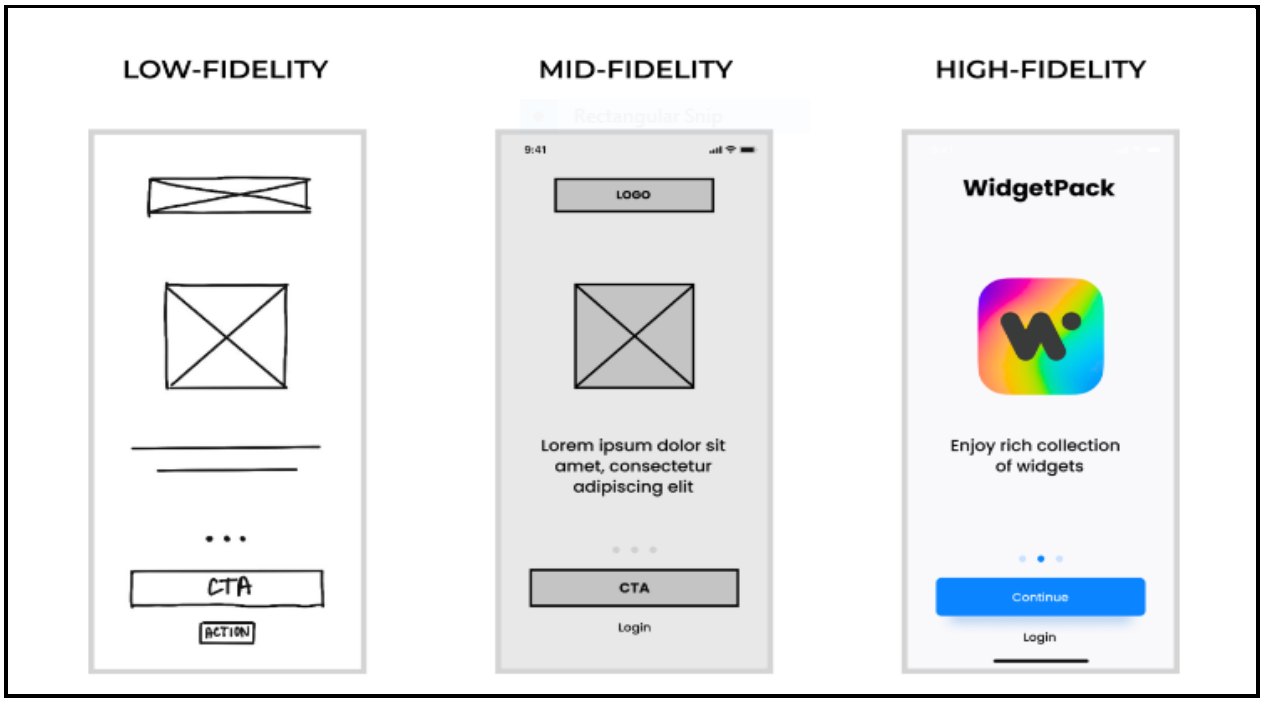

Fig.10.1

VII. Required Resources

Sr. No.	Name of the Resources	Specifications	Qty
1.	Computer system	Processor - 2.9 GHz or equivalents or higher with 10th generation or onwards Operating System - 64 bit RAM - 8GB DDR3 or higher Internet Connectivity	1
2.	Design tool	Figma	1

VIII. Precautions to be followed

1. Handle computer system with care.
2. Check the basic hardware and software requirement

IX. Conclusion

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X. Practical related questions

1. List some of the best wireframe tools.
2. What screen size for wireframing?
3. Write steps to create high fidelity prototype using design tool?
4. Design the quiz for https://vigyanprasar.gov.in web site. (Attach Output)
5. Design the quiz to display following output.

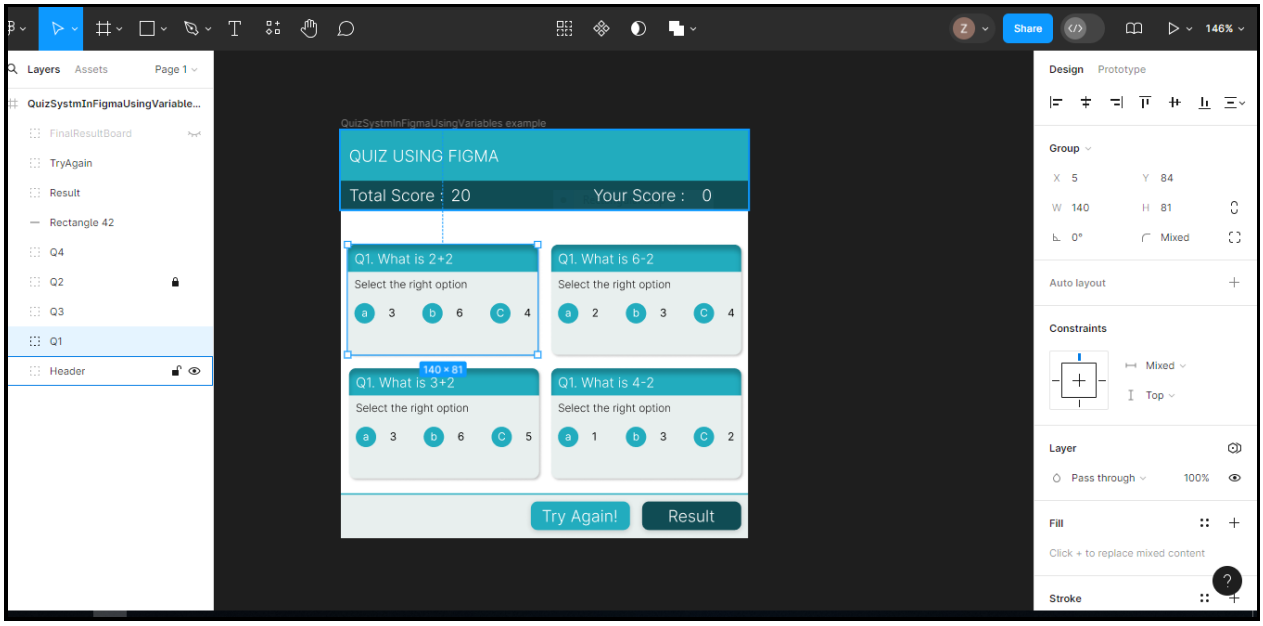

Fig10.2

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XI. References/Suggestions for further reading

1. https://www.geeksforgeeks.org/wireframing/
2. https://yellow.systems/blog/what-it-takes-to-create-a-wireframe
3. https://www.figma.com/community/tag/quiz/files
4. https://www.youtube.com/watch?v=K-DRTBMnzm8
5. https://www.youtube.com/watch?v=KCYLE78w074

XII. Assessment Scheme (25 Marks)

S. No.	Weightage- Process related: 60%	Marks-15
1.	Design UI	
2.	Follow ethical practices	
3.	Quality of output achieved(LLO mapped)	
	Weightage- Product related: 40%	**Marks-10**
4.	Completion and submission of practical in time	
5.	Answer to sample questions	
	Total 25	
	Dated Signature of Course Teacher	

Practical No. 11: Create any two gamification effects for given user interface in given scenario

I. **Practical Significance**

Gamification is the process of applying game design elements and principles to non-game contexts to engage users and motivate them to achieve specific goals. It involves incorporating elements such as points, badges, leaderboards, challenges, and rewards into activities that are traditionally non-game-related. The goal of gamification is to enhance user engagement, increase motivation, promote behavior change, and drive desired outcomes.

II. **Industry / Employer Expected Outcome(s)**

This practical is expected to develop the following skills

1. Design user-centered applications, websites, interfaces.

2. Able to design the gamification effects using user interface.

III. **Course Level Learning Outcome(s)**

CO3 - Select appropriate visual design for given problem.

CO4 - Create interactions using design tool.

IV. **Learning Outcome(s)**

LLO.11.1 Observe gamification techniques used in existing user interfaces.

LLO.11.2 Use files, templates to create gamification effect in given scenario using design tool.

V. **Relevant Affective Domain related Outcomes**

1. Follow safety practices.

2. Maintain tools and equipment.

3. Follow ethical practices.

VI. **Relevant Theoretical Background**

Gamification effects in the context of a user interface involves drawing upon principles from various fields such as psychology, behavioral economics, game design, and human-computer interaction.After designing the gamification effects using design tools, you can prototype and test the interfaces with potential users to gather feedback and iterate on the designs as needed. By leveraging design software and templates, you can efficiently create engaging gamification effects that enhance the user experience of the educational language learning app.

Two effects of racing gamification:

1. Increased Engagement: Gamification increases customer engagement by making your product more entertaining, creating a sense of friendly competition, and rewarding behaviors that you'd like users to repeat.

2. Improved Skill Development: Gamification in racing improves learning and skill development by making practice engaging and providing instant feedback through game-like elements.

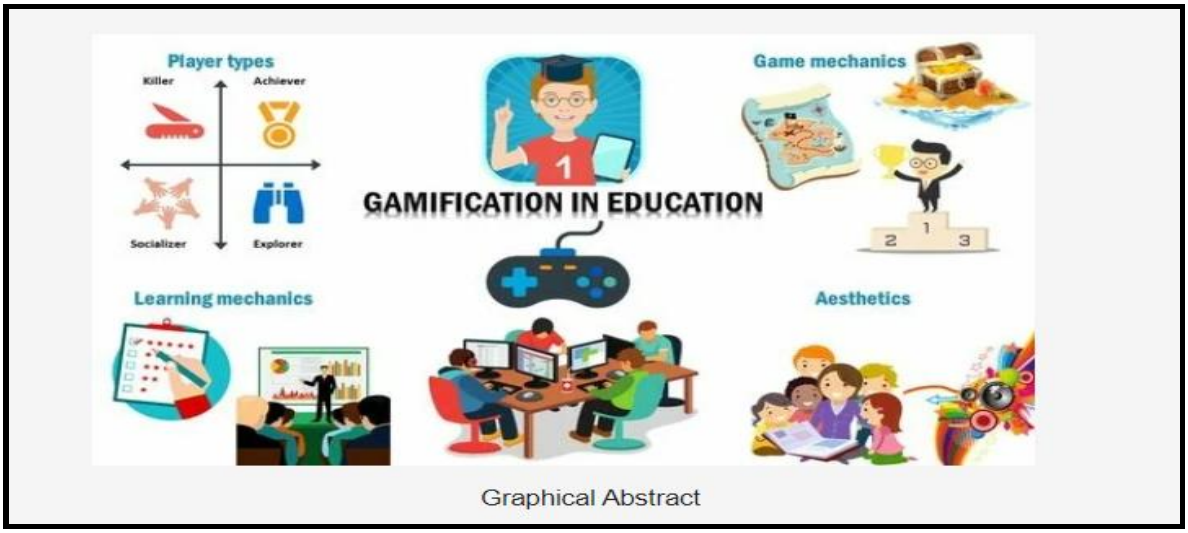

Fig.11.1

VII. Required Resources

Sr. No.	Name of the Resources	Specifications	Qty
1.	Computer system	Processor - 2.9 GHz or equivalents or higher with 10th generation or onwards Operating System - 64 bit RAM - 8GB DDR3 or higher Internet Connectivity	1
2.	Design tool	Figma	1

VIII. Precautions to be followed

1. Handle computer system with care.
2. Check the basic hardware and software requirement

IX. Conclusion

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X. Practical related questions

1. List two gamification effects.
2. List gamification techniques.
3. Design a racing gamification interface in Figma (Attach Output)

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XI. References/Suggestions for further reading

1. https://www.geeksforgeeks.org/wireframing/
2. https://yellow.systems/blog/what-it-takes-to-create-a-wireframe
3. .https://www.elucidat.com/showcase/#game-like-quiz-product-knowledge
4. https://www.youtube.com/watch?v=KCYLE78w074

XII. Assessment Scheme (25 Marks)

S. No.	Weightage- Process related: 60%	Marks-15
1.	Design UI	
2.	Follow ethical practices	
3.	Quality of output achieved(LLO mapped)	
	Weightage- Product related: 40%	**Marks-10**
4.	Completion and submission of practical in time	
5.	Answer to sample questions	
	Total 25	
	Dated Signature of Course Teacher	

Practical No. 12: Create gamification for task completion in website such as LMS/ retail website/ banking website

I. Practical Significance

Creating gamification for task completion in websites such as Learning Management Systems (LMS), retail websites, and banking websites is to enhance user engagement, motivation, satisfaction, and retention. By making the experience more interactive and rewarding, gamification can drive users to complete tasks more frequently and effectively.

II. Industry / Employer Expected Outcome(s)

This practical is expected to develop the following skills

1. Design user-centered applications, websites, interfaces.

2. Design the gamification task.

III. Course Level Learning Outcome(s)

CO3 - Select appropriate visual design for given problem.

CO4 - Create interactions using design tool.

CO5 - Create innovative design prototype for given applications.

IV. Learning Outcome(s)

LLO.12.1 Use files, templates to create gamification effect in given scenario using design tool.

V. Relevant Affective Domain related Outcomes

1. Follow safety practices.

2. Maintain tools and equipment.

3. Follow ethical practices.

VI. Relevant Theoretical Background

In gamification, task completion effects are visual or auditory cues that provide feedback to users when they successfully complete a task or achieve a goal. These effects are designed to enhance user engagement, motivation, and satisfaction. Here are some common types of task completion effects used in gamification:

Popping-up Effects: popping-up effects are visual animations where an element appears to emerge or grow suddenly from a smaller size or a hidden state to a larger, more prominent state. These effects are commonly used in user interfaces to draw attention to specific elements, provide feedback, or indicate completion of tasks.

Designing Balloon Elements: Creating a releasing balloon in the air effect involves designing balloon elements and animating them to simulate the motion of balloons floating upward.

Examples of Gamification in the Banking Industry

Gamification is the process of incorporating games—creative and immersive experiences—into nongame settings. Within the realm of banking, gamification techniques can convert routine banking processes into tasks with clear milestones and rewards, encompass interactive quizzes for educational purposes, provide a structured framework to facilitate goal-oriented pursuits, or simply tap into their desire for amusement, simplicity, social engagement, recognition, or compensation.

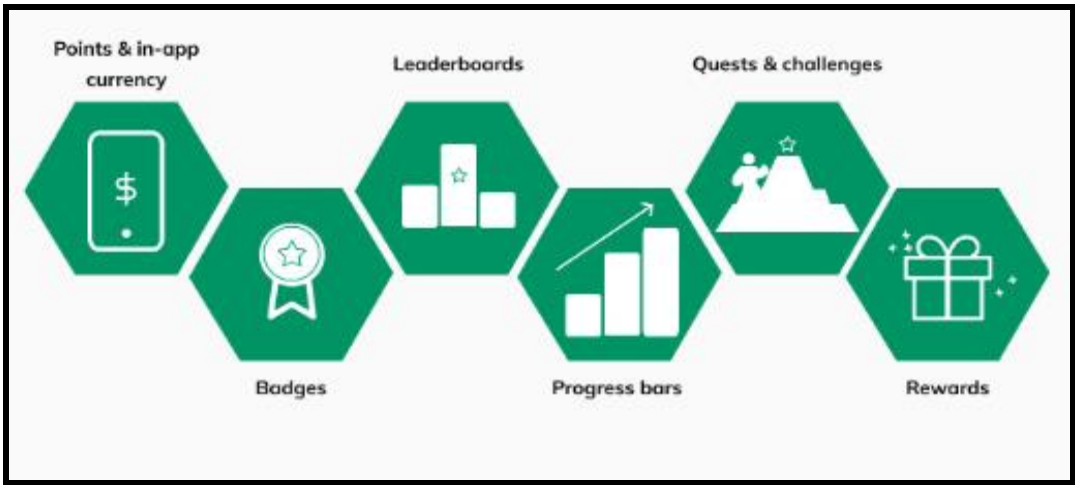

Fig 12.1 Gamification Techniques in banking

Gamification techniques in banking include awarding points for everyday banking activities and achieving milestones, which can be redeemed for rewards such as fee waivers, gift cards, and discounts. Additionally, banks can use progress tracking, achievement badges, and interactive educational tools to engage users and promote better financial habits.

VII. Required Resources

Sr. No.	Name of the Resources	Specifications	Qty
1.	Computer system	Processor - 2.9 GHz or equivalents or higher with 10th generation or onwards Operating System - 64 bit RAM - 8GB DDR3 or higher Internet Connectivity	1
2.	Design tool	Figma	1

VIII. Precautions to be followed

1. Handle computer system with care.
2. Check the basic hardware and software requirement

IX. Conclusion

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X. Practical related questions

1. Design Gamification for Learning Management Systems (LMS). (Attach Output)
2. Write steps to design Gamification for Retail Websites
3. What is Prototype?

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XI. References/Suggestions for further reading

1. https://www.geeksforgeeks.org/wireframing/
2. https://yellow.systems/blog/what-it-takes-to-create-a-wireframe
3. https://www.figma.com/community/tag/quiz/files
4. https://www.youtube.com/watch?v=K-DRTBMnzm8
5. https://www.youtube.com/watch?v=KCYLE78w074

XII. Assessment Scheme (25 Marks)

S. No.	Weightage- Process related: 60%	Marks-15
1.	Design UI	
2.	Follow ethical practices	
3.	Quality of output achieved(LLO mapped)	
	Weightage- Product related: 40%	**Marks-10**
4.	Completion and submission of practical in time	
5.	Answer to sample questions	
	Total 25	
	Dated Signature of Course Teacher	

Practical No. 13: Create any five micro animations for the given user interface in given scenario

I. Practical Significance

Micro-animations are small, preferably functional animations that support the user by giving visual feedback and displaying changes more clearly. Creating micro-animations can significantly enhance the user experience by providing feedback, guiding the user, and making the interface more engaging.

II. Industry / Employer Expected Outcome(s)

This practical is expected to develop the following skills

1. Design user-centered applications, websites, interfaces.
2. Able to know web development using micro-animation.
3. Able to know UI/UX design using micro-animation.

III. Course Level Learning Outcome(s)

CO3 - Select appropriate visual design for given problem.

CO4 - Create interactions using design tool.

IV. Learning Outcome(s)

LLO.13.1 Observe micro-animations used in existing websites, Apps, interfaces.

LLO.13.2 Use templates to create micro-animation for given user scenario.

V. Relevant Affective Domain related Outcomes

1. Follow safety practices.
2. Maintain tools and equipment.
3. Follow ethical practices.

VI. Relevant Theoretical Background

Micro-animations in UI (User Interface) design refer to small, subtle animations that enhance the user experience by providing visual feedback, guiding users, and making interactions more engaging and intuitive. These animations are typically short, lasting only a few seconds or milliseconds, and are designed to improve the usability and aesthetic appeal of the interface without overwhelming the user.

Scenario: File Downloading (Progress Bar Effect)

Creating a spin progress bar micro animation in Figma involves using the tool's interactive components and smart animation features. Here's a step-by-step guide to creating a spin progress bar in Figma:

Step-by-Step Procedure:

1. **Create the Base Circle**

Draw a Circle:

- Select the Ellipse tool (O) and draw a perfect circle by holding down the Shift key.
- Set the size of the circle, e.g., 100x100 pixels.
- Set the stroke width, e.g., 10 pixels, and remove the fill color.

Style the Circle:

- Change the stroke color to a white or any (this will be the background of the progress bar).

2. **Create the Spinner Arc**

Duplicate the Circle:

- Copy the circle (Cmd/Ctrl + C) and paste it (Cmd/Ctrl + V).
- Change the stroke color to your desired color for the progress indicator, e.g., blue.

Modify the Arc:

- Select the circle and go to the "Design" panel.
- Adjust the arc angles to create a semi-circle or partial arc (e.g., start at 0° and end at 270°).

3. **Group and Align**

Group the Circles:

- Select both the base circle and the spinner arc and group them (Cmd/Ctrl + G).

Align to Center:

- Ensure the group is centered within your frame or artboard.

4. **Create Animation Frames**

Duplicate the Frame:

- Duplicate the current frame to create a second frame (this will be the target for the animation).

Rotate the Spinner Arc:

- In the second frame, select the spinner arc.
- Use the rotate tool to rotate the spinner arc by 360°.

5. **Add Smart Animation**

Prototype Mode:

- Switch to the Prototype tab in Figma.

Create Interaction:

- Select the first frame and create an interaction by dragging the blue prototyping handle to the second frame.
- In the Interaction details, set the trigger to "After Delay" with a delay of 1ms.

Animation Settings:

- Set the Animation to "Smart Animate."
- Choose "Linear" as the easing type to ensure a consistent spin.
- Set the duration, e.g., 1000ms (1 second).

Loop the Animation:

- To make the animation loop, create an interaction from the second frame back to the first frame with the same settings.

6. **Preview the Animation**

- Run the Prototype:
- Click the Present button (Play icon) to preview the animation.
- The spinner should rotate continuously, creating a smooth progress animation.

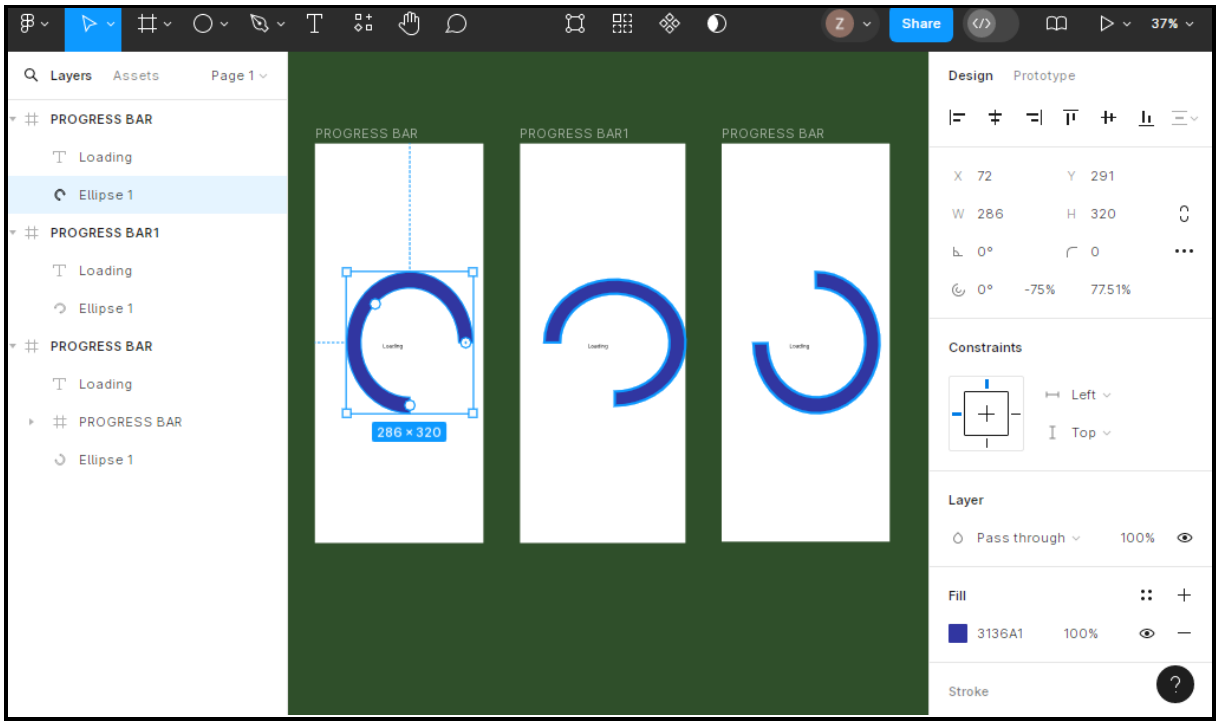

Fig 13.1

VII. Required Resources

Sr. No.	Name of the Resources	Specifications	Qty
1.	Computer system	Processor - 2.9 GHz or equivalents or higher with 10th generation or onwards Operating System - 64 bit RAM - 8GB DDR3 or higher Internet Connectivity	1
2.	Design tool	Figma	1

VIII. Precautions to be followed

1. Handle computer system with care.
2. Check the basic hardware and software requirement

IX. Conclusion

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X. Practical related questions

1. List any ten micro-animations for user interface.
2. What is micro-animation?
3. Design the micro-animation for Status Notification (Attach Output).
4. Design the micro-animation for Button Click Feedback (Attach Output).

XI. References/Suggestions for further reading

1. https://www.youtube.com/watch?v=9aXz-xT5pGM
2. www.figma.com
3. https://www.youtube.com/watch?v=ARxUAjZCFuE
4. https://alphaefficiency.com/micro-animations

XII. Assessment Scheme (25 Marks)

S. No.	Weightage- Process related: 60%	Marks-15
6.	Design UI	
7.	Follow ethical practices	
8.	Quality of output achieved(LLO mapped)	
	Weightage- Product related: 40%	**Marks-10**
9.	Completion and submission of practical in time	
10.	Answer to sample questions	
	Total 25	
	Dated Signature of Course Teacher	

Practical No. 14: Create prototyping with different interactions –tab, click, hover, delay, for the given user interface

I. Practical Significance

Prototypes in Figma allow us to create interactive flows and functions that help in interaction with the user. It is a kind of presentation to the user or client before actually submitting the design. Prototypes are a form of UX designing that is, creating user experience features.

II. Industry / Employer Expected Outcome(s)

This practical is expected to develop the following skills

1. Design user-centered applications, websites, interfaces.

2. Able to create interactive user interface prototypes.

III. Course Level Learning Outcome(s)

CO4 - Create interactions using design tool.

CO5 - Create innovative design prototype for given applications.

IV. Learning Outcome(s)

LLO.14.1 Use Interactions/ events to create Prototype in design tool.

V. Relevant Affective Domain related Outcomes

1. Follow safety practices.

2. Maintain tools and equipment.

3. Follow ethical practices.

VI. Relevant Theoretical Background

Prototyping in user interface (UI) design refers to the process of creating interactive representations of a digital product's interface before it is fully developed. These prototypes serve as a simulation of the final product, allowing designers, stakeholders, and developers to visualize the user experience, test functionalities, and gather feedback early in the design process.

Steps to Create Prototyping with Different Interactions:

1. Tab Interaction:

Design the Navigation Bar with tabs for "Home", "Tasks", and "Settings".

Create frames for each section: Home, Tasks, and Settings.

Link each tab to its respective frame to switch between sections.

2. Click Interaction:

Design an "Add Task" button.

Create a modal frame for adding new tasks.

Link the button to the modal frame to open it on click.

Include a close button inside the modal to close it.

3. Hover Interaction:

Design a button with a hover effect (e.g., change color or scale up).

Set up the hover effect to trigger when the cursor hovers over the button.

4. Delay Interaction:

Design a loading animation or placeholder content.

Set up a delay before transitioning to the actual content.

Show the loading animation or placeholder content for a few seconds before revealing the actual content.

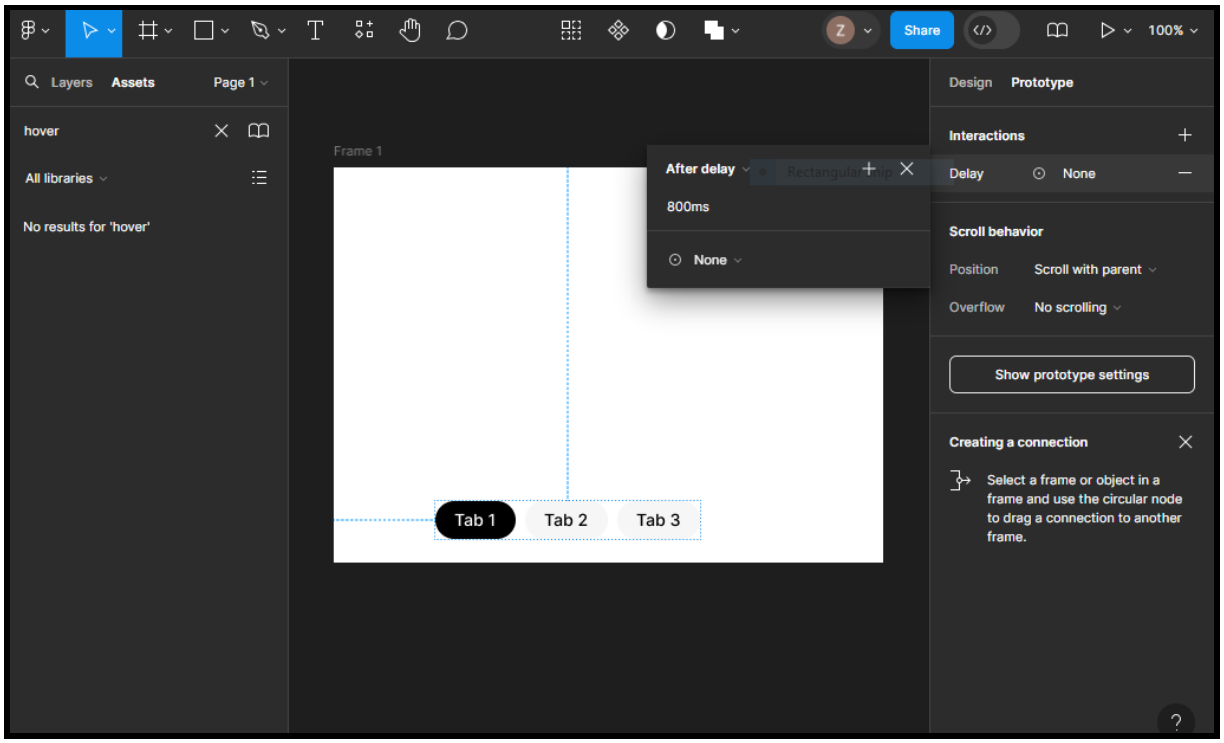

Fig.14.1

VII. Required Resources

Sr. No.	Name of the Resources	Specifications	Qty
1.	Computer system	Processor - 2.9 GHz or equivalents or higher with 10th generation or onwards Operating System - 64 bit RAM - 8GB DDR3 or higher Internet Connectivity	1
2.	Design tool	Figma	1

VIII. Precautions to be followed

1. Handle computer system with care.
2. Check the basic hardware and software requirement

IX. Conclusion

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X. Practical related questions

1. How to create interactive prototypes?
2. How do you Prototype a hover button in Figma?
3. **Design a** task management web application with tab, click, hover, delay interactions. (Attach Output).
4. Write a step to create prototype in figma.

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XI. References/Suggestions for further reading

1. https://www.geeksforgeeks.org/prototypes-in-figma/

2. www.figma.com

3. https://www.youtube.com/watch?v=C8m0_QnKQ6Y

4. https://www.figma.com/community/file/1121342776794069793/25-button-hover-animations

XII. Assessment Scheme (25 Marks)

S. No.	Weightage- Process related: 60%	Marks-15
11.	Design UI	
12.	Follow ethical practices	
13.	Quality of output achieved(LLO mapped)	
	Weightage- Product related: 40%	**Marks-10**
14.	Completion and submission of practical in time	
15.	Answer to sample questions	
	Total 25	
	Dated Signature of Course Teacher	

Practical No. 15: Convert created prototype in HTML page(s)

I. Practical Significance

Converting Figma prototypes into HTML pages lies in its ability to bridge the gap between design and development, facilitate collaboration and communication, and drive iterative improvements based on real-world feedback and testing.

II. Industry / Employer Expected Outcome(s)

This practical is expected to develop the following skills

1. Design user-centered applications, websites, interfaces.

2. Able to convert created prototypes in HTML.

III. Course Level Learning Outcome(s)

CO5 - Create innovative design prototype for given applications.

IV. Learning Outcome(s)

LLO.15.1 Use plug-in/ extension to convert the created prototype into html page(s).

LLO.15.2 Use browser to run the generated HTML page(s).

V. Relevant Affective Domain related Outcomes

1. Follow safety practices.
2. Maintain tools and equipment.
3. Follow ethical practices.

VI. Relevant Theoretical Background

Understanding the theory behind converting a prototype created in Figma into HTML pages involves knowledge of web development concepts, design principles, and the role of prototyping in the design-to-development workflow.

How Figma to HTML Website works:

- Install the plugin.
- In Figma select the art-board with your website.
- Choose "Plugins" and click on Export Figma to Websites / HTML by Siter.io.
- Pair the Siter.io with Figma.
- Export your designs!

OR

To convert your website prototype into HTML pages using plug-ins or extensions, you can follow these steps:

Step 1: Design Your Prototype

Step 2: Use Conversion Plugins/Extensions

Step 3: Customize and Optimize

Step 4: Integrate Interactions and JavaScript

Step 5: Test and Deploy

By following these steps, you can effectively convert your design prototype into functional HTML pages using the appropriate tools and plugin

Fig.15.1

Fig.15.2

VII. Required Resources

Sr. No.	Name of the Resources	Specifications	Qty
1.	Computer system	Processor - 2.9 GHz or equivalents or higher with 10th generation or onwards Operating System - 64 bit RAM - 8GB DDR3 or higher Internet Connectivity	1
2.	Design tool	Figma	1

VIII. Precautions to be followed

1. Handle computer system with care.
2. Check the basic hardware and software requirement

IX. Conclusion

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X. Practical related questions

1. What is sketching?

2. List the basics of sketching.

3. Design a task management web application with tab, click, hover, delay interactions.

(Attach output)

4. Write a step to convert created prototype in HTML.

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XI. References/Suggestions for further reading

1. https://www.geeksforgeeks.org/prototypes-in-figma/

2. www.figma.com

3.https://help.figma.com/hc/en-us/articles/360061175334-Create-interactive-components- with-variants

4. https://webflow.com/resources/access/web-design-101

XII. Assessment Scheme (25 Marks)

S. No.	Weightage- Process related: 60%	Marks-15
1.	Design UI	
2.	Follow ethical practices	
3.	Quality of output achieved(LLO mapped)	
	Weightage- Product related: 40%	**Marks-10**
4.	Completion and submission of practical in time	
5.	Answer to sample questions	
	Total 25	
	Dated Signature of Course Teacher	