ACS COLLEGE OF ENGINEERING, BANGALORE

DEPARTMENT OF CSE- Data Science

B

Analysis & Design of Algorithms LAB

Manual

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Department of CSE-Data Science

ACSCE, Bengaluru

ListOfExperiments

1. ChatAppRedesign:CreateaWireframeandredesignanypopularchatapp.

2. FoodApp: CreateaWireframe,Design and PrototypetheUI PagesfortheFoodApplication.

3. SocialMedia App:CreateaWireframe, DesignandPrototypeSocialMediaPhotoSharing App.

4. ProductWebsite:DesignandPrototypeaProduct WebsitePage.Createwebpagesand rollovers for the web pages.

5. Travel Agency Website: Create a wireframe, Design and prototype the UI for the website includingdesignforHomePagewithsearchbar,Activitiespage,Client TestimonialPage,Image Gallery.

6. UI/UXDesigner Portfolio Design: Create a wireframe, Designand prototype a UI for a portfolio includingdesignforAboutpage,Workshowcasepage,Blogpage,Contactpage.

7. DashboardDesign:Createawireframe,DesignandPrototypeDashboardUIpage,addsome Dashboard details, statistics and graphs, Add dropdown options for some dashboard details.

8. E-Commerce Website: Create a wireframe, Design and prototype Web pages including productcategorypages(example: mobiles,gamingconsoles,Speakers),product pagesineach category, buy now page, add to cart page.

9. EducationalWebsite:Createawireframe,   DesignandPrototypetheUIforan   educational website-IncludeaHomepagewithfooter,AboutUsPage,Programspage,Instructorspage, Pricing page, Payments page with radial buttons. Design dropdowns for programs button.

10. MusicPlayer App:Createawireframe,Designandprototypethe pageswithabackground and a Rollover button, and Song selection Page with a Home Rollover button. The third page may include animated play and pause button, play music animation, timer animation.

Experiment1:ChatAppRedesign:CreateaWireframeandredesignanypopularchat app.

Aim: Toanalyze,wireframe,andredesignapopularchat applicationtoimproveitsuser experience and interface while applying UI/UX design principles.

Objective:
- TounderstandandapplyUI/UXprinciples inmobileapplicationdesign.
- Toanalyzeandimprovetheuserexperienceofapopularchatapplication.
- TocreateawireframeandaredesignedUIprototypeusingFigma.
- Toenhancetheusability,accessibility, andaestheticsofthe application.

SoftwareRequired:
- Computer System
- Figma
- AdobeXDorBalsamiq(optional)

ExperimentOverview:
Inthisexperiment, we willanalyzeanexistingchatapplication, identifypainpoints, createa wireframe, and redesign its UI for better usability and aesthetics.

Procedure:

Step1:Research&Analysis
1. Chooseapopularchat application(e.g.,WhatsApp,Telegram,Signal, Messenger).
2. IdentifyusabilityissuesandchallengesintheexistingUI.
3. Documentthestrengthsandweaknessesoftheapp'sdesign.
4. Defineuserpersonastounderstandtargetaudienceneeds.
5. Studycompetitorapplicationstogaininsightsintoindustrybestpractices.

Step2:Wireframing
1. Sketchalow-fidelitywireframeonpaper or usedigitaltoolslikeBalsamiqorFigma.
2. Designthestructureofkeyscreens:
    - Login/SignupPage
    - ChatList Page
    - IndividualChatScreen
    - SettingsPage
3. Focusonthelayoutand navigationratherthanvisualdesign.
4. Ensurethewireframealignswithuser needsandpainpointsidentifiedinStep1.

Step 3:UIRedesigninFigma
1. UseFigmatocreateahigh-fidelityprototype.
2. ApplyUI principlessuch as:
    - Consistentcolorschemesandtypography.
    - Properspacing,alignment,andcontrast.
    - Improvedaccessibilityand usability.

3. Add icons,buttons,andotherUIelementsforapolishedlook.
4. OptimizetheUIforresponsivenessacrossdifferentscreensizes.
5. Optional:LinkscreensinFigmatodemonstrateinteractive navigation.

Step 4:Presentation&Feedback
1. PresentthewireframeandredesignedUIinclass.
2. Explaindesignchoicesandimprovementsmade.
3. Receivefeedbackfrompeersandtheinstructor.
4. Refinethedesignbased onfeedback.

Conclusion:
Bycompletingthisexperiment, we willhavegainedpracticalexperience inUI/UXdesignby identifying usability issues in a chat application and applying their knowledge to create an improved version. This will help them develop critical design thinking and problem-solving skills essential for user-centered digital experiences.

Experiment2:FoodApp:CreateaWireframe,Design,andPrototypetheUIPagesforthe Food Application.

Aim: To designandprototypeauser-friendlyand visuallyappealing foodorderingapplication using UI/UX principles.

Objective:
- TounderstandandapplyUI/UXprinciples inmobileapplicationdesign.
- Toanalyzeandcreateanintuitiveuserflowforafoodorderingapp.
- Todesignawireframeandhigh-fidelityUI prototypeusingFigma.
- Toenhanceusability,accessibility, andaestheticsinfoodappdesign.

SoftwareRequired:
- ComputerSystem
- Figma
- AdobeXDorBalsamiq(optional)

ExperimentOverview:
Inthisexperiment,wewillcreateawireframeand designafoodorderingapplication,focusing on an intuitive user experience and appealing visual aesthetics.

Procedure:

Step1:Research&Analysis
1. Identifykeyfeaturesrequired ina foodorderingapp(e.g.,menu browsing, cart, checkout).
2. Analyzepopularfooddeliveryappslikeswiggy, Zomato,or Uber Eats.
3. Identifyusabilitychallengesandareas for improvement.
4. Defineuserpersonastounderstandtargetaudienceneeds.
5. Studycompetitorapplicationstogain insightsinto industrybestpractices.

Step2:Wireframing
1. Sketchalow-fidelitywireframeonpaper or usedigitaltoolslikeBalsamiqorFigma.
2. Designthestructureofkeyscreens:
    - HomePage(RestaurantListings&Search)
    - RestaurantMenuPage
    - Cart&Checkout Page
    - OrderTrackingPage
    - UserProfile&Settings
3. Focusonthelayoutand navigationratherthanvisualdesign.
4. Ensurethewireframealignswithuserneedsandpainpoints identifiedinStep1.

Step 3:UIDesignin Figma
1. UseFigmatocreateahigh-fidelityprototype.
2. ApplyUI principlessuch as:
   - Consistentcolorschemesandtypography.
   - Properspacing,alignment,andcontrast.
   - Improvedaccessibilityand usability.
3. Add icons,buttons,andotherUIelementsforapolishedlook.
4. OptimizetheUIforresponsivenessacrossdifferentscreensizes.
5. Optional:LinkscreensinFigmatodemonstrateinteractive navigation.

Step 4:Presentation& Feedback
1. PresentthewireframeandredesignedUIinclass.
2. Explaindesignchoicesandimprovementsmade.
3. Receivefeedbackfrompeersandtheinstructor.
4. Refinethedesignbased onfeedback.

Conclusion:
Bycompleting this experiment, we will have gained hands-on experience in UI/UX design by conceptualizing,wireframing,andprototypingafoodorderingapplication.Thiswillhelpthem develop a user-centric design approach and practical skills for digital product design.

Experiment3:SocialMediaApp:CreateaWireframe,Design,andPrototypea Social Media Photo Sharing App.

Aim: Todesignandprototypea socialmediaphoto-sharingapplicationusingUI/UXdesign principles, focusing on user engagement and visual appeal.

Objective:
- TounderstandandapplyUI/UXprinciplesinsocialmediaapplicationdesign.
- Toanalyzeandcreateanintuitiveuserflowforaphoto-sharingapp.
- Todesignawireframeandhigh-fidelityUI prototypeusingFigma.
- Toenhanceusability,accessibility,andaestheticsinsocialmediaapplications.

SoftwareRequired:
- ComputerSystem
- Figma
- AdobeXDorBalsamiq(optional)

ExperimentOverview:
Inthisexperiment,wewillcreateawireframeand designasocialmediaphoto-sharing application, ensuring a user-friendly experience and engaging visual aesthetics.

Procedure:

Step1:Research&Analysis
1. Identifykeyfeaturesrequired ina photo-sharingapp(e.g.,userprofile, feed,post creation).
2. Analyzepopularapps likeInstagram, Snapchat,orPinterest.
3. Identifyusabilitychallengesandareas for improvement.
4. Defineuserpersonastounderstandtargetaudienceneeds.
5. Studycompetitorapplicationstogaininsightsinto industrybestpractices.

Step2:Wireframing
1. Sketchalow-fidelitywireframeonpaper or usedigitaltoolslikeBalsamiqorFigma.
2. Designthestructureofkeyscreens:
    - Login/SignupPage
    - HomeFeed (PhotoPosts&UserInteractions)
    - PhotoUpload&EditingPage
    - UserProfile Page
    - Notifications&SettingsPage
3. Focusonthelayoutand navigationratherthanvisualdesign.
4. Ensurethewireframealignswithuserneedsandpainpoints identifiedinStep1.

Step 3:UIDesignin Figma
1. UseFigmatocreateahigh-fidelityprototype.

2. ApplyUI principlessuch as:
   - Consistentcolorschemesandtypography.
   - Properspacing,alignment,andcontrast.
   - Improvedaccessibilityand usability.
3. Add icons,buttons, andotherUIelementsforapolishedlook.
4. OptimizetheUIforresponsivenessacrossdifferentscreensizes.
5. Optional:LinkscreensinFigmatodemonstrateinteractive navigation.

Step 4:Presentation& Feedback
   1. PresentthewireframeandredesignedUIinclass.
   2. Explaindesignchoicesandimprovementsmade.
   3. Receivefeedbackfrompeersandtheinstructor.
   4. Refinethedesignbased onfeedback.

Conclusion:
By completing this experiment, we will have hands-on experience in UI/UX design by conceptualizing, wireframing, and prototyping a social media photo-sharing application. This willhelpthemdevelopskills increating visuallyappealinganduser-friendlydigitalexperiences.

Experiment4: ProductWebsite:DesignandPrototypeaProductWebsitePage.Createweb pages and rollovers for the web pages.

Aim: To designandprototypeaproduct websitewithinteractivewebpagesandrolloversusing UI/UX design principles.

Objective:
- Tounderstand and applyUI/UXprinciplesinwebdesign.
- Toanalyzeandcreateanintuitiveuserflowforaproduct website.
- TodesignandprototypekeywebpagesusingFigma.
- Toimplementinteractiveelementssuchashovereffectsand rollovers.

SoftwareRequired:
- ComputerSystem
- Figma
- AdobeXDorBalsamiq(optional)
- HTML,CSS,JavaScript(for advancedinteractivity)

ExperimentOverview:
Inthisexperiment,wewillcreateawireframeand designaprototype foraproduct website, focusing on usability, visual appeal, and interactive elements.

Procedure:

Step1:Research&Analysis
1. Identifykeyfeaturesrequiredinaproductwebsite(e.g.,homepage,productdetails, contact page).
2. AnalyzepopularproductwebsiteslikeApple, Amazon,orNike.
3. Identifyusabilitychallengesandareas for improvement.
4. Defineuser personastounderstandthetargetaudience.
5. Studycompetitorwebsitesto gaininsightsinto industrybestpractices.

Step2:Wireframing
1. Sketchalow-fidelitywireframeonpaper or usedigitaltoolslikeBalsamiqorFigma.
2. Designthestructureofkeywebpages:
   - Homepage(ProductOverview&CalltoAction)
   - ProductDetailsPage
   - AboutUs/CompanyInformationPage
   - ContactPagewithaForm
3. Focusonthelayoutand navigationratherthanvisualdesign.
4. Ensurethewireframealignswithuserneedsandpainpoints identifiedinStep1.

Step3:UIDesignin Figma
1. UseFigmatocreate ahigh-fidelityprototype ofthe website.
2. ApplyUI principlessuch as:
    - Consistentcolorschemesandtypography.
    - Properspacing,alignment,andcontrast.
    - Improvedaccessibilityand usability.
3. Add icons,buttons,andotherUIelementsforapolishedlook.
4. OptimizetheUIforresponsivenessacrossdifferentscreensizes.
5. Implementinteractiveelementslikehovereffects,tooltips,androllovers.

Step 4:Prototype&Interaction
1. LinkwebpagesinFigmato demonstratenavigation.
2. Addhoverstatesforbuttons,images,and links.
3. Implementrolloversforproductimagesand menus.
4. Testtheprototypefor usabilityandsmoothinteractions.

Step 5:Presentation& Feedback
1. PresentthewireframeandredesignedUIinclass.
2. Explaindesignchoicesandimprovementsmade.
3. Receivefeedbackfrompeersandtheinstructor.
4. Refinethedesignbased onfeedback.

Conclusion:
By completing this experiment, we will have gained hands-on experience in designing and prototypingaproduct websitewithinteractiverollovers. Thiswillhelpthemdevelopskills in user-centeredwebdesignandenhancetheirabilityto createvisuallyappealingand functional digital experiences.

Experiment5:TravelAgencyWebsite:Createawireframe,DesignandprototypetheUI for the website including design for Home Page with search bar, Activities page, Client Testimonial Page, Image Gallery.

Aim: Todesignandprototypeatravelagencywebsitewithanintuitiveand visuallyappealing user interface using UI/UX design principles.

Objective:
- Tounderstandand applyUI/UXprinciplesintravelwebsitedesign.
- Toanalyzeandcreateanintuitiveuserflowforatravelagencywebsite.
- TodesignandprototypekeywebpagesusingFigma.
- Toenhanceusability,accessibility,andaestheticsintravel-relatedwebdesign.

SoftwareRequired:
- ComputerSystem
- Figma
- AdobeXDorBalsamiq(optional)
- HTML,CSS,JavaScript (foradvancedinteractivity)

ExperimentOverview:
Inthisexperiment, we willcreateawireframeand designaprototype foratravelagency website, ensuring a user-friendly experience and engaging visual elements.

Procedure:

Step1:Research&Analysis
1. Identifykeyfeaturesrequired inatravelagencywebsite(e.g., search bar, activitylistings, testimonials, image gallery).
2. AnalyzepopulartravelwebsiteslikeExpedia,MakeMyTrip, orTripAdvisor.
3. Identifyusabilitychallengesandareas for improvement.
4. Defineuserpersonastounderstandtargetaudienceneeds.
5. Studycompetitorwebsitestogain insightsintoindustrybestpractices.

Step2:Wireframing
1. Sketchalow-fidelitywireframeonpaper or usedigitaltoolslikeBalsamiqorFigma.
2. Designthestructureofkeywebpages:
    - **HomePage**(SearchBar,Featured Destinations)
    - **ActivitiesPage**(ListofActivitieswithFilters)
    - **Client TestimonialPage**(User Reviews &Ratings)
    - **ImageGallery**(High-QualityTravelPhotos)
3. Focusonthelayoutand navigationratherthanvisualdesign.
4. Ensurethewireframealignswithuserneedsandpainpoints identifiedinStep1.

Step 3:UIDesignin Figma
1. UseFigmatocreate ahigh-fidelityprototype ofthe website.
2. ApplyUI principlessuch as:
   - Consistentcolorschemesandtypography.
   - Properspacing,alignment,andcontrast.
   - Improvedaccessibilityandusability.
3. Add icons,buttons,andotherUIelementsforapolishedlook.
4. OptimizetheUIforresponsivenessacrossdifferentscreensizes.
5. Implementinteractiveelementslikehovereffects,searchbarfilters,andimagepop-ups.

Step 4:Prototype&Interaction
1. LinkwebpagesinFigmato demonstratenavigation.
2. Addhoverstatesforbuttons,images,and links.
3. Implementsearchbarinteractionsandactivityfiltering.
4. Testtheprototypefor usabilityandsmoothinteractions.

Step 5:Presentation& Feedback
1. PresentthewireframeandredesignedUIinclass.
2. Explaindesignchoicesandimprovementsmade.
3. Receivefeedbackfrompeersandtheinstructor.
4. Refinethedesignbased onfeedback.

Conclusion:
By completing this experiment, we will have gained hands-on experience in designing and prototypingatravelagencywebsitewithessentialpagesand interactiveelements.Thiswillhelp them develop user-friendly and visually appealing digital experiences.

Experiment6:UI/UXDesignerPortfolioDesign:Createawireframe,Designandprototype a UI for a portfolio including design for About page, Work showcase page, Blog page, Contact page.

Aim: To designandprototypeapersonalportfolio website foraUI/UXdesigner,ensuringan engaging and professional user experience.

Objective:
- TounderstandandapplyUI/UXprinciples inportfoliowebsite design.
- Toanalyzeandcreateanintuitiveuserflowforapersonalportfolio.
- TodesignandprototypekeywebpagesusingFigma.
- Toenhanceusability,accessibility,andaestheticsinaportfolio design.

SoftwareRequired:
- ComputerSystem
- Figma
- AdobeXDorBalsamiq(optional)
- HTML,CSS,JavaScript(foradvancedinteractivity)

ExperimentOverview:
Inthisexperiment, wewillcreateawireframeand designaprototype foraUI/UXdesigner's portfolio, ensuring a user-friendly and visually appealing layout.

Procedure:

Step1:Research&Analysis
1. Identifykeyfeaturesrequired inaportfolio website(e.g.,aboutsection,workshowcase, blog, contact form).
2. Analyzepopulardesignerportfoliosforbestpractices.
3. Identifyusabilitychallengesandareas for improvement.
4. Defineuser personastounderstandthetargetaudience.
5. Studycompetitorwebsitestogain insightsintoindustrystandards.

Step2:Wireframing
1. Sketchalow-fidelitywireframeonpaper or usedigitaltoolslikeBalsamiqorFigma.
2. Designthestructureofkeywebpages:
    - **AboutPage**(Introduction,Experience, Skills)
    - **WorkShowcasePage**(PortfolioProjects,CaseStudies)
    - **BlogPage**(Articles,DesignInsights, Tips)
    - **ContactPage**(Form,SocialLinks,Email)
3. Focusonlayout,readability, andnavigation.
4. Ensurethewireframealignswithuserexpectations andprofessionalpresentation.

Step 3:UIDesignin Figma
1. UseFigmatocreateahigh-fidelityprototypeoftheportfoliowebsite.
2. ApplyUI principlessuch as:
    - Consistentcolorschemesandtypography.
    - Properspacing,alignment,andcontrast.
    - Improvedaccessibilityand usability.
3. Addinteractiveelementslikehovereffects,animations,andnavigationmenus.
4. OptimizetheUIforresponsivenessacrossdifferentscreensizes.

Step 4:Prototype&Interaction
1. LinkwebpagesinFigmato demonstratenavigation.
2. Add hoverstatesforbuttons,images,andlinks.
3. Implementformvalidationanduser-friendlyinteractions.
4. Testtheprototypefor usabilityandsmoothinteractions.

Step 5:Presentation& Feedback
1. PresentthewireframeandredesignedUIinclass.
2. Explaindesignchoicesandimprovementsmade.
3. Receivefeedbackfrompeersandtheinstructor.
4. Refinethedesignbased onfeedback.

Conclusion:
Bycompletingthisexperiment,wewillgainhands-onexperience indesigningandprototypinga personal portfolio website that showcases their work effectively. This will help them develop a professional online presence and enhance their UI/UX design skills.

Experiment7:DashboardDesign:Createawireframe,DesignandPrototypeDashboard UI page, add some Dashboard details, statistics and graphs, Add dropdown options for some dashboard details.

Aim: TodesignandprototypeadashboardUIwithstatisticaldata,graphs,anddropdown options, ensuring a user-friendly and interactive experience.

Objective:
- TounderstandandapplyUI/UXprinciplesindashboard design.
- Tocreateadata-drivenUIlayoutthatenhancesusabilityandefficiency.
- TodesignandprototypekeydashboardelementsusingFigma.
- Toimplementinteractiveelementssuchasgraphs,statistics,anddropdownmenus.

SoftwareRequired:
- ComputerSystem
- Figma
- AdobeXD (optional)
- HTML,CSS,JavaScript (foradvancedinteractivity)

ExperimentOverview:
Inthisexperiment, wewillcreateawireframeand designaprototype foradashboardUIthat presents data insights effectively and includes interactive elements.

Procedure:

Step1:Research&Analysis
1. Identifythepurposeofthedashboard(e.g., businessanalytics,healthcare,finance, education).
2. AnalyzepopulardashboarddesignsfromplatformslikeGoogleAnalytics,Tableau,or Power BI.
3. Identifykeymetricsanddatavisualizationelements.
4. Defineuserpersonastounderstandtheirneedsandexpectations.

Step2:Wireframing
1. Sketchalow-fidelitywireframeonpaper or usedigitaltoolslikeBalsamiqorFigma.
2. Designthestructureofkeydashboardelements:
    - **HeaderSection**(Title, ProfileIcon, Navigation)
    - **SidebarNavigation**(DashboardSections,Filters)
    - **MainContentArea**(Graphs, Statistics,DataTables)
    - **InteractiveElements**(DropdownMenus, Buttons, Filters)
3. Ensurethelayoutisclearandeasytonavigate.
4. Focusondisplaying keydatainsightseffectively.

Step 3:UIDesignin Figma
1. UseFigma tocreateahigh-fidelityprototypeofthedashboard UI.
2. ApplyUI principlessuch as:
   - Consistentcolorschemesandtypography.
   - Properspacing,alignment,andcontrast.
   - Improvedaccessibilityand usability.
3. Addicons,buttons,graphs,anddropdownsforuser interaction.
4. Implementvisualhierarchytohighlightimportantdata.

Step 4:Prototype&Interaction
1. Linkdashboardsections inFigmatodemonstratenavigation.
2. Adddropdownmenus forfilteringdashboard details.
3. Implement hovereffectsandinteractiveelements.
4. Testtheprototypefor usabilityandsmoothinteractions.

Step 5:Presentation& Feedback
1. PresentthewireframeandredesignedUIinclass.
2. Explaindesignchoicesanddatavisualizationstrategies.
3. Receivefeedbackfrompeersandtheinstructor.
4. Refinethedesignbased onfeedback.

Conclusion:

Bycompleting thisexperiment, we willgain hands-onexperience indesigning and prototyping a dashboardUIthat presentskeydatainsightswithinteractiveelements. Thiswillhelpthemcreate functional and visually engaging dashboards.

Experiment 8: E-Commerce Website: Create a wireframe, Design and prototype Web pagesincludingproductcategorypages(example:mobiles,gamingconsoles,Speakers), product pages in each category, buynow page, add to cart page.

Aim: TodesignandprototypeanE-Commercewebsitewithproduct categorypages,product detail pages, a BuyNow page, and an Add to Cart page, ensuring a seamless shopping experience.

Objective:
- Tounderstandand applyUI/UXprinciplesine-commercewebsitedesign.
- Toanalyzeandcreateanintuitiveuserflowforanonlineshopping platform.
- TodesignandprototypekeywebpagesusingFigma.
- Toenhanceusability,accessibility, andaestheticsine-commerceUIdesign.

SoftwareRequired:
- ComputerSystem
- Figma
- AdobeXDorBalsamiq(optional)
- HTML,CSS,JavaScript (foradvancedinteractivity)

ExperimentOverview:
Inthisexperiment, wewillcreateawireframeand designaprototype forane-commerce website, ensuring a user-friendly and visually appealing interface for online shopping.

Procedure:

Step1:Research&Analysis
1. Identifykeyfeaturesrequired inane-commercewebsite(e.g.,productcategories, product detail pages, cart, checkout).
2. Analyzepopulare-commerceplatformslikeAmazon,Flipkart,andShopifyforbest practices.
3. Identifyusabilitychallengesandareasfor improvement.
4. Defineuser personastounderstandthetargetaudience.
5. Studycompetitorwebsitestogain insightsinto industrystandards.

Step2:Wireframing
1. Sketchalow-fidelitywireframeonpaper or usedigitaltoolslikeBalsamiqorFigma.
2. Designthestructureofkeywebpages:
    - **HomePage**(ProductHighlights,SearchBar,Categories)
    - **ProductCategoryPages**(Mobiles,GamingConsoles,Speakers,etc.)
    - **ProductDetailPage**(ProductDescription,Price,Images,Reviews, Buy Now/Add to Cart Buttons)
    - **AddtoCartPage**(CartSummary, UpdateQuantity, RemoveItems)
    - **BuyNowPage**(BillingDetails,PaymentOptions,OrderConfirmation)
3. Focusonlayout,readability, andnavigation.
4. Ensurethewireframealignswithuserexpectationsande-commercebestpractices.

Step 3:UIDesignin Figma
1. UseFigmatocreateahigh-fidelityprototypeofthee-commercewebsite.
2. ApplyUI principlessuch as:
    - Consistentcolorschemesandtypography.
    - Properspacing,alignment,andcontrast.
    - Improvedaccessibilityand usability.
3. Addproduct images,buttons,icons,andinteractiveelements.
4. Implement aresponsivedesigntoensureaseamlessexperienceacrossdevices.

Step 4:Prototype&Interaction
1. LinkwebpagesinFigmato demonstratenavigation.
2. Addhovereffectsforbuttons,images,andlinks.
3. Implementdropdownmenusand filtersforproductcategories.
4. Testtheprototypefor usabilityandsmoothinteractions.

Step 5:Presentation& Feedback
1. PresentthewireframeandredesignedUIinclass.
2. Explaindesignchoicesandimprovementsmade.
3. Receivefeedbackfrompeersandtheinstructor.
4. Refinethedesignbased onfeedback.

Conclusion:
Bycompletingthisexperiment,wewillgainhands-onexperience indesigningandprototyping an e-commerce website with essential pages for product browsing, purchasing, and cart management. This will help them develop user-friendly and business-driven online shopping interfaces.

Experiment9:EducationalWebsite:Createawireframe,DesignandPrototypetheUIfor aneducationalwebsite-IncludeaHomepagewithfooter,AboutUsPage,Programspage, Instructorspage, Pricingpage, Paymentspagewithradialbuttons.Designdropdownsfor programs button.

Aim: Todesignandprototypeaneducationalwebsitethat providesstructurednavigationand user-friendly access to course information, instructors, pricing, and payment options.

Objective:
- TounderstandandapplyUI/UXprinciplesineducationalwebsite design.
- Tocreateanintuitiveuserflowforonline learning platforms.
- TodesignandprototypekeywebpagesusingFigma.
- Toenhanceusability,accessibility, andinteractivityinaneducationalUIdesign.

SoftwareRequired:
- ComputerSystem
- Figma
- AdobeXDorBalsamiq(optional)
- HTML,CSS,JavaScript (foradvancedinteractivity)

ExperimentOverview:
Inthisexperiment,wewillcreateawireframeand designaprototype foraneducationalwebsite, ensuring a seamless learning experience through intuitive navigation and interactive elements.

Procedure:

Step1:Research&Analysis
1. Identifykeyfeaturesrequired inaneducationalwebsite(e.g.,homepage,about us, programs, instructors, pricing, payment).
2. Analyzepopulare-learningplatformslikeCoursera,Udemy,andKhanAcademyforbest practices.
3. Identifyusabilitychallengesandareas for improvement.
4. Defineuser personastounderstandthetargetaudience.
5. Studycompetitorwebsitestogain insightsinto industrystandards.

Step2:Wireframing
1. Sketchalow-fidelitywireframeonpaper or usedigitaltoolslikeBalsamiqorFigma.
2. Designthestructureofkeywebpages:
    - **Homepagewith Footer**(Overview,SearchBar,Featured Courses)
    - **AboutUsPage**(InstitutionInformation,Vision,Mission)
    - **ProgramsPage**(CourseListingswithDropdownMenu)
    - **InstructorsPage**(Profiles,Expertise,Experience)
    - **PricingPage**(SubscriptionPlans, CourseFees)
    - **PaymentsPage**(PaymentOptionswithRadialButtons)
3. Focusonlayout,readability, andnavigation.
4. Ensurethewireframe alignswithuserexpectations andeducationalbestpractices.

Step 3:UIDesignin Figma
1. UseFigmatocreateahigh-fidelityprototypeoftheeducationalwebsite.
2. ApplyUI principlessuch as:
   - Consistentcolorschemesandtypography.
   - Properspacing,alignment,andcontrast.
   - Improvedaccessibilityand usability.
3. Addcoursethumbnails,instructorprofiles,buttons,anddropdowns.
4. Implement aresponsivedesigntoensureaseamlessexperienceacrossdevices.

Step 4:Prototype&Interaction
1. LinkwebpagesinFigmato demonstratenavigation.
2. Adddropdownmenusforselectingprograms.
3. Implementinteractiveradialbuttonsforpaymentoptions.
4. Testtheprototypefor usabilityandsmoothinteractions.

Step 5:Presentation& Feedback
1. Present thewireframeandredesignedUIinclass.
2. Explaindesignchoicesandimprovementsmade.
3. Receivefeedbackfrompeersandtheinstructor.
4. Refinethedesignbased onfeedback.

Conclusion:

Bycompletingthisexperiment,wewillgainhands-onexperience indesigningandprototyping an educational website with structured navigation, interactive dropdowns, and payment functionalities. This will help them develop user-friendly and visually appealing e-learning interfaces.

Experiment 10: Music Player App: Create a wireframe, Design and prototype the pages withabackgroundandaRolloverbutton,andSongselectionPagewithaHomeRollover button. The third page may include animated play and pause button, play music animation, timer animation.

Aim: Todesignandprototypeamusicplayerappwithavisuallyappealingbackground,rollover buttons, song selection page, and animated play/pause button along with music playback animations.

Objective:
- TounderstandUI/UXprinciplesindesigninga musicplayerapp.
- Tocreateanintuitiveuserinterfacewithengaginganimations.
- TodesignandprototypekeymusicplayerpagesusingFigma.
- Toenhanceinteractivitywithanimated elements.

SoftwareRequired:
- ComputerSystem
- Figma
- AdobeXD (optional)
- AfterEffects(foradvancedanimations)

ExperimentOverview:
Inthisexperiment,wewillcreateawireframeand designaprototype foramusicplayerappwith interactive elements such as rollover buttons, animated playback controls, and song selection.

Procedure:

Step1:Research&Analysis
1. Identifykeyfeaturesrequired ina musicplayerapp(e.g.,play/pause button,song selection, animations).
2. AnalyzepopularmusicappslikeSpotify,AppleMusic,andYouTubeMusic.
3. Identifyusabilitychallengesandareas for improvement.
4. Defineuser personastounderstandthetargetaudience.

Step2:Wireframing
1. Sketchalow-fidelitywireframeonpaper or usedigitaltoolslikeBalsamiqorFigma.
2. Designthestructureofkeyappscreens:
    - **HomeScreenwithBackground& RolloverButton**(AppName, VisualTheme)
    - **SongSelectionPage** (ListofSongs, HomeRollover Button)
    - **MusicPlayerPage**(Play/PauseButton,AnimatedTimer,PlaybackAnimation)
3. Focusonlayout,readability, anduser engagement.

Step 3:UIDesignin Figma
1. UseFigmatocreateahigh-fidelityprototypeofthemusicplayer app.
2. ApplyUI principlessuch as:
   - Consistentcolorschemesandtypography.
   - Properspacing,alignment,andcontrast.
   - Improvedaccessibilityand usability.
3. Addinteractiveelements,suchas:
   - Rolloverbuttonsfornavigation.
   - Play/pausebuttonwithanimation.
   - Timeranimationtoindicatesongprogress.

Step 4:Prototype&Interaction
1. LinkappscreensinFigmatodemonstrate navigation.
2. Addhover/rollover effectsforbuttons.
3. Implementanimatedplay/pausebutton.
4. Addmusicplaybackanimationwithaprogressbar.
5. Testtheprototypefor usabilityandsmoothinteractions.

Step 5:Presentation& Feedback
1. PresentthewireframeandredesignedUIinclass.
2. Explaindesignchoicesandimprovementsmade.
3. Receivefeedbackfrompeersandtheinstructor.
4. Refinethedesignbased onfeedback.

Conclusion:
Bycompletingthisexperiment,wewillgainhands-onexperience indesigningandprototypinga music player app with interactive UI elements and animations. This will help them develop engaging and visually appealing music playback interfaces.