IT1214 Human Computer Interaction

Assignment- 1 Part-2

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Project Overview

This Based on our Part 1 usability study, we identified 24 critical usability issues across four key pages of the SLIIT City Uni website. This Part 2 report presents our low fidelity paper prototype solutions designed to address these issues through improved visibility, layout, and consistency.

Our design approach focuses on solving the high-severity usability problems identified:

- Information overload and poor visual hierarchy
- Unclear navigation and inconsistent placement
- Text-heavy content without proper organization
- Missing contact information and calls-to-action
- Confusing pathway presentations

Each team member has created paper prototypes for their assigned page, incorporating established design principles to enhance user experience and task completion efficiency.

Design Solutions Overview

Core Design Principles Applied

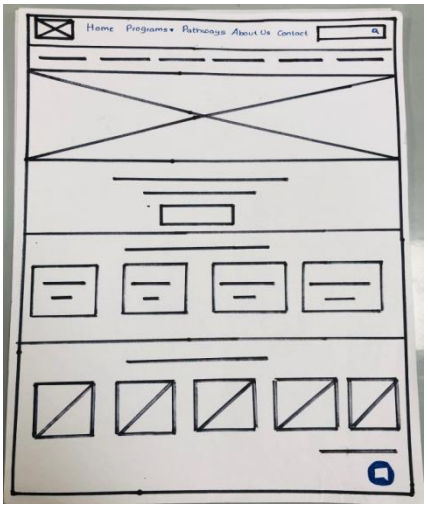
1. **Visual Hierarchy**: Clear information prioritization using size, color, and spacing
2. **Consistency**: Standardized navigation, typography, and layout patterns
3. **Simplicity**: Reduced cognitive load through organized content presentation
4. **Accessibility**: Improved contrast, readable fonts, and clear visual cues
5. **User-Centered Design**: Solutions addressing specific user tasks and goals

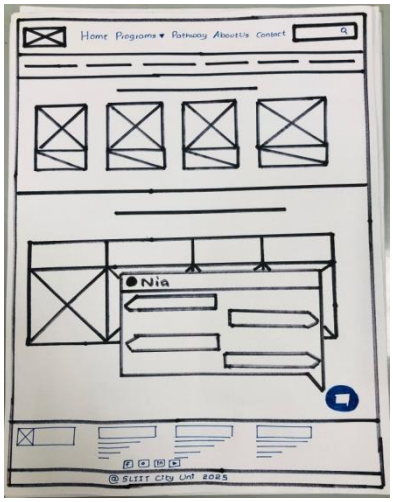
Problem-Solution Mapping

Our low fidelity prototypes directly address the 10 high-severity issues identified in Part 1, ensuring each design decision has a clear usability justification.

Home Page Redesign

Paper Prototype Design





Paper Prototype Features:

- **Clean Header Section**: University logo, simplified main navigation with clear labels
- **Hero Section**: Prominent welcome message with key student announcements
- **Information Cards**: Organized content blocks for News, Events, Quick Links, and Student Services
- **Controlled Chatbot**: Fixed bottom-right position, non-intrusive design
- **Quick Access Panel**: Dedicated section for frequently needed student information

Design Principles Applied

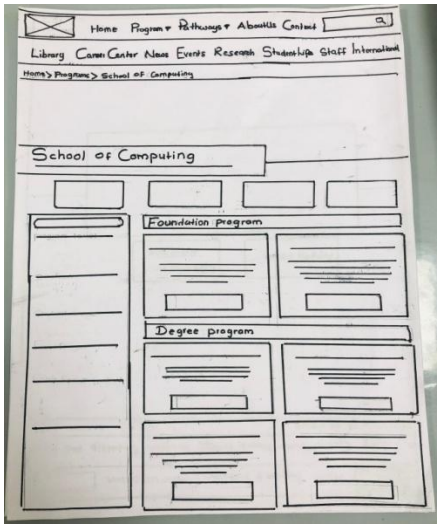
- **Visual Hierarchy**: Large hero section draws immediate attention, followed by organized content cards
- **Gestalt Principles**: Proximity grouping related information, similarity in card designs
- **Fitts's Law**: Larger, easier-to-click navigation elements and action buttons
- **Miller's Rule**: Limited to 7±2 main navigation items to reduce cognitive overload

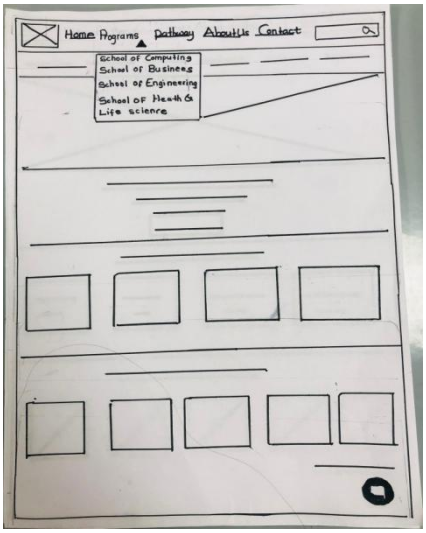
Justification

The redesigned homepage reduces information overload by organizing content into digestible sections. The prominent student information panel addresses the high-priority issue of important information being buried. Visual hierarchy guides users naturally through the page, improving scanning efficiency.

Program Page Redesign (School of Computing)

Paper Prototype Design





Paper Prototype Features:

- **Clear Breadcrumb Navigation**: Shows user location within site structure
- **Program Filter Panel**: Category-based filtering (Undergraduate, Postgraduate, Diploma)
- **Program Cards Layout**: Visual cards with program highlights, duration, and key details
- **Improved Typography**: Larger, readable fonts with clear information hierarchy
- **Quick Comparison Tool**: Side-by-side program comparison feature
- **Contact Information Panel**: Easily accessible advisor details

Design Principles Applied

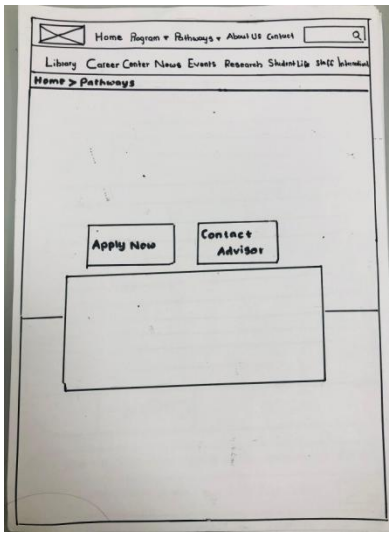
- **Information Architecture**: Clear categorization and filtering options
- **Scannable Design**: Card-based layout enables quick program comparison
- **Consistency**: Uniform card design across all programs
- **Progressive Disclosure**: Summary cards with "Learn More" options for detailed information

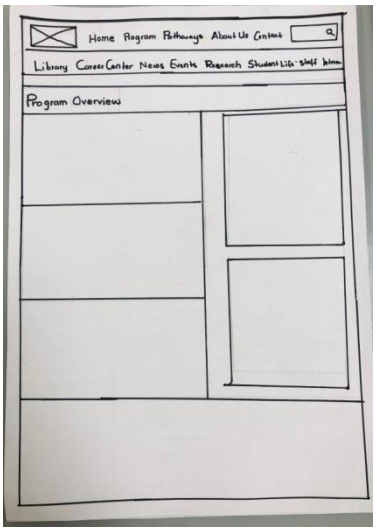
Justification

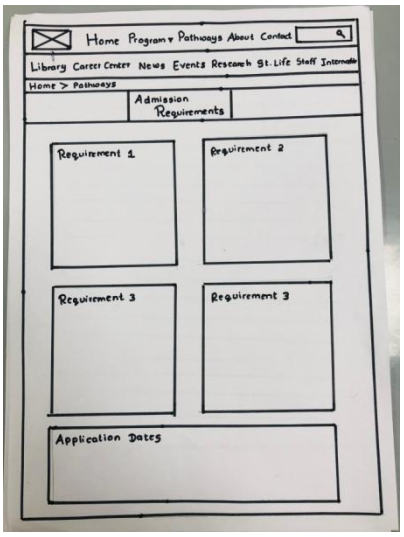
The card-based layout solves the text-heavy presentation issue by breaking information into scannable chunks. Filter functionality addresses the search problem, while improved typography enhances readability. Clear sectioning and consistent formatting improve overall usability.

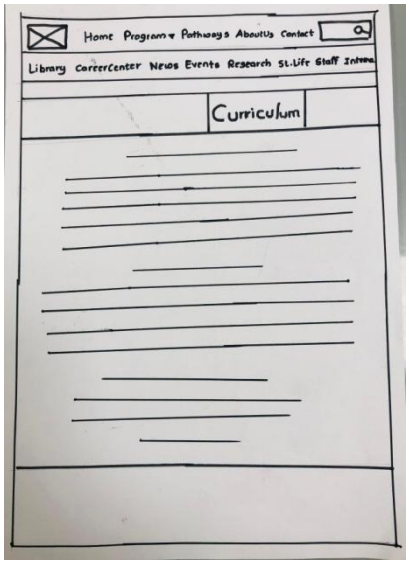
Individual Program Page Redesign (BSc Cyber Security)

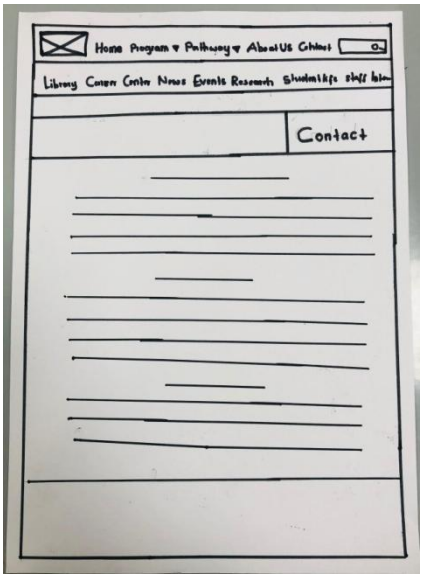
Paper Prototype Design











Paper Prototype Features:

- **Program Header**: Clear program title, university partnership, and key highlights
- **Tabbed Navigation**: Organized sections (Overview, Curriculum, Admission, Electives, Contact)
- **Admission Requirements Panel**: Prominently displayed entry criteria and deadlines
- **Visual Curriculum Map**: Semester-by-semester course progression with visual elements
- **Electives Showcase**: Clear presentation of elective options with descriptions
- **Contact Card**: Dedicated advisor information with multiple contact methods
- **Call-to-Action Buttons**: Prominent "Apply Now" and "Contact Advisor" buttons

Design Principles Applied

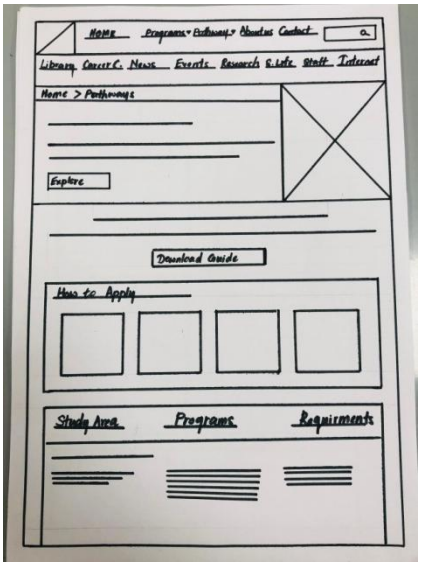
- **Information Prioritization**: Critical admission information prominently displayed
- **Progressive Disclosure**: Tabbed navigation allows focused information viewing
- **Visual Communication**: Diagrams and icons supplement text-heavy content
- **Direct Manipulation**: Clear action buttons for next steps

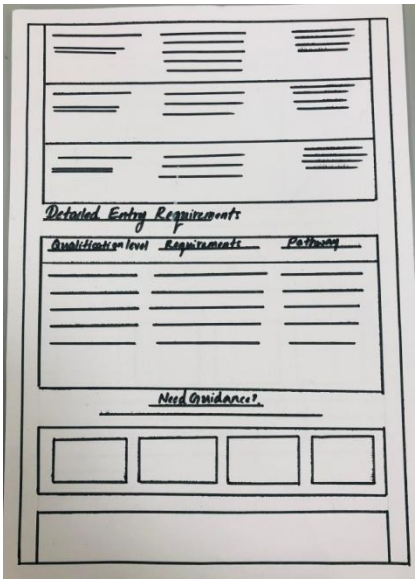
Justification

The tabbed organization solves the buried information problem by bringing critical details forward. Visual curriculum maps address text-density issues while maintaining comprehensive information. Prominent contact information and calls-to-action guide users toward desired outcomes.

Pathways Page Redesign

Paper Prototype Design





Paper Prototype Features:

- **Interactive Pathway Map**: Visual flowchart showing academic progression
- **Pathway Categories**: Clear sections for different entry points (Foundation, Diploma, Degree)
- **Step-by-Step Guidance**: Numbered progression with visual connectors
- **Pathway Cards**: Individual cards for each route with duration and requirements
- **Interactive Elements**: Clickable pathway components showing detailed information
- **Comparison Matrix**: Side-by-side pathway comparison table

Design Principles Applied

- **Visual Flow**: Clear directional indicators showing academic progression
- **Color Coding**: Different colors for various pathway types
- **Interactive Design**: Hover states and clickable elements for exploration
- **Spatial Organization**: Logical left-to-right flow showing time progression

Justification

The interactive pathway map addresses the static layout issue while providing clear visual cues for different routes. Step-by-step guidance replaces confusing explanations with intuitive visual flow. Interactive elements allow users to explore options without feeling overwhelmed.

Design Principles Applied Across All Pages

1. Consistency Standards

- **Navigation**: Uniform header navigation across all pages
- **Typography**: Consistent font hierarchy (H1, H2, body text)
- **Color Scheme**: Unified color palette maintaining brand identity
- **Layout Grid**: Standard column structure and spacing

2. Accessibility Improvements

- **Contrast**: High contrast text on background colors
- **Font Size**: Minimum 14px for body text, larger for headings
- **Click Targets**: Minimum 44px touch targets for mobile compatibility
- **Visual Indicators**: Clear focus states and active element indication

3. User Experience Enhancements

- **Reduced Cognitive Load**: Information chunking and progressive disclosure
- **Clear Affordances**: Obvious interactive elements and navigation cues
- **Error Prevention**: Clear labeling and guidance for user actions
- **Feedback**: Visual confirmation for user interactions

4. Mobile-First Considerations

- **Responsive Grid**: Flexible layout adapting to different screen sizes
- **Touch-Friendly Design**: Adequate spacing between interactive elements
- **Content Priority**: Most important information displayed first
- **Simplified Navigation**: Collapsible menu structure for mobile devices

Video Demonstration

Video Link

- https://mysliit-my.sharepoint.com/:f:/g/personal/sa24610780_my_sliit_lk/EihAoDjhUsZJrUGCY0NiWpIB4JvGDgI3Jr9ljiz6J6YwSA?e=Qok4Bg

Conclusion

Our low-fidelity prototypes successfully address the 24 usability issues identified in Part 1, with particular focus on the 11 high-priority issues. The designs follow established HCI principles and provide a solid foundation for the high-fidelity prototypinsg phase.