KARACHI INSTITUTE OF ECONOMICS TECHNOLOGY
College of Engineering
(Department of Software Engineering)

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Human Computer Interaction

Complex Engineering Problem

Student name: Hashir Ahmed Buriro **Faculty Signature: _____**

Student ID: 13948 _____ **Date: _____**

CLOs		PLOs		Bloom Taxonomy	
CLO-3		PLO-2: Design and Development		C3: Apply	
SNo.	**Complex Engineering Solving Attributes**	**Excellent (75-100%)**	**Average (50-75%)**	**Poor (<50%)**	**Marks**
CLO-3	**WP1- Depth of knowledge required** A theory-based understanding of the natural sciences applicable to the discipline.	The student states the problem clearly and has sufficient in-depth knowledge to solve the problem.	The student inadequately defines the problem and has insufficient in-depth knowledge to solve the problem.	The student cannot define the problem and has a lack of knowledge to solve the problem.	2
CLO-3	**WP3 - Depth of analysis required** Conceptually-based mathematics, numerical analysis, statistics and formal aspects of computer and information science to support analysis and modeling applicable to the discipline.	Identifies the correct approach for solving the problem that applies within a specific context and obtained the output as per requirement.	Identifies the improper approach for solving the problem that applies within a specific context and obtained slightly different output as per requirement.	Unable to identify the approach for solving the problem that applies within a specific context that will lead to wrong output.	2
CLO-3	**WP4 - Familiarity of issues** Involve infrequently encountered issues	Properly point-out different cases of an underlying problem that lead to exceptional results.	Do not point out all cases of an underlying problem that lead to exceptional results.	Inept to find any cases of an underlying problem that lead to exceptional results.	6
				Total Marks:	10

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Submission Deadline 23rd May 2024

Name: Hashir Ahmed Buriro
Registration Number: 13948

Imagine a smart home automation system that controls various devices such as lights, thermostats, security cameras, and appliances. The system allows users to monitor and manage their home remotely through a mobile application installed on their smartphones or tablets.

Problematic Design:

The current design of the smart home application suffers from several usability issues that hinder the user experience:

1. Lack of User-Friendliness: The user interface (UI) is cluttered and unintuitive, making it challenging for users to find and access the controls they need. Users often struggle to navigate through multiple screens and menus to perform simple tasks like adjusting the thermostat or turning off lights.
2. Inconsistent Behavior: The application behaves inconsistently across different devices and platforms, leading to confusion among users. Certain features may work differently or be unavailable depending on the device or operating system version, resulting in frustration and dissatisfaction.
3. Poor Feedback Mechanisms: The system fails to provide adequate feedback to users when their commands are executed or when devices encounter errors. Users are left uncertain whether their actions were successful, leading to doubts and mistrust in the system's reliability.
4. Limited Personalization Options: The application lacks customization features that allow users to tailor the interface and settings to their preferences. Users have limited control over the appearance and layout of the UI, making it difficult to adapt the system to their unique needs and preferences.

Apply HCI concepts:

a) How you improve design to solve problem.
b) Sketch a design in which you will present a good design to solve these problems.
c) Use any software for sketching design. (Balsmiq is one of the best tool for sketching design).

To Improve A Mobile Banking App:

1. **Security:** Add biometric login, two-factor authentication, and real-time fraud alerts.
2. **UI/UX:** Simplify navigation, customizable dashboards, and consistent design.
3. **Support:** Provide live chat, a help center, and in-app feedback.
4. **Money Management:** Offer spending insights, budgeting tools, and savings goals.
5. **Transactions:** Enable quick transfers, automated bill payments, and better mobile check deposits.
6. **Accessibility:** Integrate voice commands, high contrast mode, and screen reader support.
7. **Personalization:** Offer tailored recommendations, custom alerts, and location-based services.
8. **Performance:** Ensure fast load times, offline access, and regular updates.

These enhancements improve security, usability, support, financial management, and user satisfaction

Introduction:

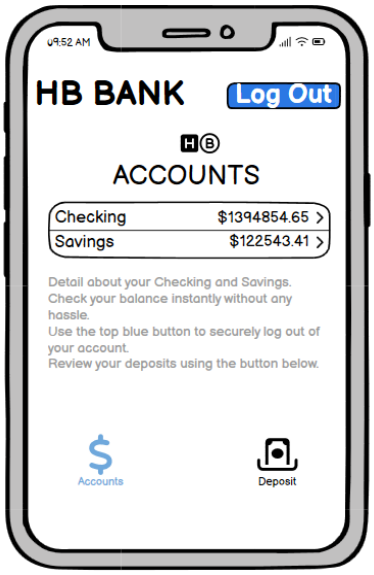
Welcome to the wireframes for our Imaginary Mobile Banking Application. These designs showcase a user-friendly and secure mobile banking experience, with intuitive navigation and easy access to essential features, ensuring an efficient and seamless financial management process.

Screen 1: Login:

The first wireframe is the Login screen.
Controls used for this screen:

- iPhone X
- Title / Headline
- Text Input / Text Field (x2)
- Icon (x2)
- Label / String of Text
- Button
- ON/OFF Switch / Toggle
- Link

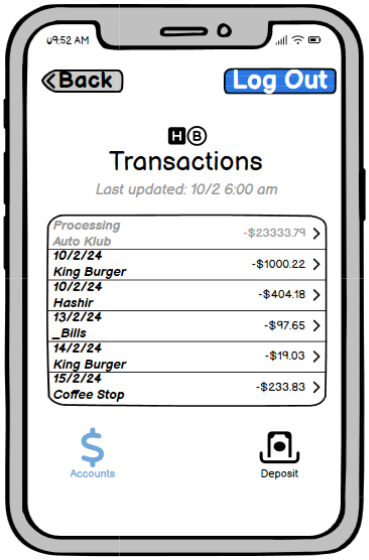
Screen 2: Accounts:



Next, the Accounts screen.
Controls used for this screen:

- iPhone X
- Icon
- Icon and Text Label (x2)
- Paragraph of Text
- iPhone Menu
- Pointy Button
- Label / String of Text (x2)

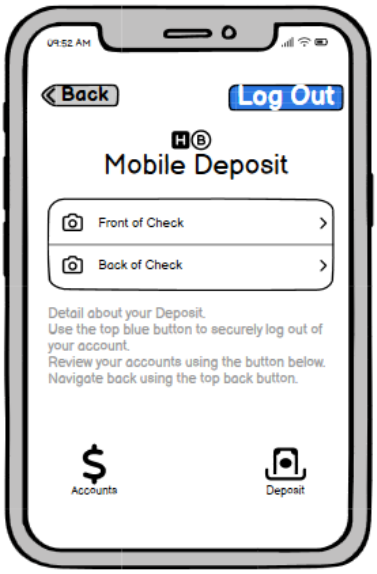
Screen 3: Transactions:



Controls used for this screen:

- iPhone X
- Pointy Button / iPhone button (x2)
- Label / String of Text (x2)
- iPhone Menu
- Icon and Text Label (x2)
- Icon

Screen 4: Deposit:



Controls used for this screen:

- iPhone
- Pointy Button
- Label / String of Text (x2)
- iPhone Menu
- Icon (x3)
- Paragraph of Text
- Icon and Text Label (x2)

Screen 5: Camera:

- iPhone
- Rectangle / Canvas / Panel (x4)
- Label / String of Text
- Pointy Button
- Image