National University of Computer and Emerging Sciences
Lahore Campus

Applied HCI (CS3014)

Date: 21st September, 2025

Course Instructor(s)

Dr.Wafa Basit

Sessional-I Exam

Section: BS-SE

Total Time: 1 Hour

Total Marks: 40

Total Questions: 6

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Student Name   Roll No   Section   Student Signature

Instructions
- All questions should be solved on the question paper. No answer sheets should be attached
- Make assumptions where necessary
- Use of lead pencil is not allowed.

Case Study

Case Study: Smart Campus Navigation System

The university plans to introduce a **"Smart Campus Navigation System"** to help students, faculty, and visitors easily find classrooms, offices, labs, and facilities across campus buildings. The system will be available as a **mobile app** with voice-guided directions, accessibility features for users with disabilities, and real-time updates (e.g., room changes, elevator maintenance, or crowded areas).

The app aims to make the campus experience smoother for all users — especially **new students**, **visually impaired users**, and **visiting parents or guests** who are unfamiliar with the campus layout.

During the initial user research, the design team conducted **interviews and observations** with 10 participants from diverse backgrounds:

- **Ali:** First-semester student, often gets lost, uses Google Maps frequently.
- **Ayshum:** Visually impaired, uses a screen reader, values voice guidance.
- **Sara:** Faculty member, wants to find available meeting rooms quickly.
- **Bilal:** Final-year student, wants to reach classes on time and avoid crowded routes.
- **Mrs. Khan:** Parent visiting the campus for her child's admission, not tech-savvy.
- **Ahmad:** Maintenance worker, needs to locate rooms for repairs efficiently.

Q1. (5 marks)
Identify 5 **behavioral variables** relevant to the users in this case study.

behavioral variables	Explanation

Q2. (5 marks)
Map each **interview subject** to the identified **behavioral variables.**

Interviewee	behavioral variables.

Q3. (6 marks)
Identify 3 **significant behavior patterns** that emerge from your mapping

Q4. (10 marks)

Expand the **description of attributes and behaviors** for one Primary persona and develop it. Explain why you have chosen a particular persona as the **primary user type** for design focus.

Q5. **(4 marks) Write down one context scenario for your primary persona.**

-------Good Luck-----