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CSE6224 SOFTWARE REQUIREMENTS ENGINEERING

Project Part 1

Topic: Campus Ride-Sharing Platform with

Parking System Integration

Project Vision Documentation

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Introduction

1.1 Purpose of the Document

The purpose of the elicitation and kano model documentation is to systematically gather, extract, organize, and present the requirements and expectations of stakeholders. It ensures a clear understanding of the software's intended functionality through various elicitation methods and serves as a reference for both clients and developers to clarify expectations, align goals, and provide a foundation for further analysis, validation, and design.

1.2 Problem statement

The Multimedia University (MMU) Cyberjaya campus frequently experiences issues related to limited parking availability, illegitimate parking practices, and the absence of coordinated transportation options for students and staff. As a result, there is a need for a system that simplifies the search for available parking, enables the reporting of unauthorized usage, and provides transportation solutions to enhance campus mobility, which would be carpooling.

1.3 Objectives

- To identify the core functionalities required by end users to ensure the system meets expectations.
- To define the preferred behaviours and specific details of each function based on user expectations.
- To determine the external systems that need to interact with the application for seamless integration.
- To capture both functional and non-functional requirements to guide design and development decisions.
- To uncover any constraints or limitations that may affect implementation.

1.4 Scope

The scope of this elicitation process covers the identification of user and administrative function requirements for the campus ride-sharing platform and parking system at Multimedia University, Cyberjaya. It includes:

- User authentication (login via Student ID and password)
- Interactive map features for viewing and navigating parking spaces
- Viewing and reporting illegitimate parking
- Admin review and management of parking reports
- Car Pooling services

It does not include:

- Payment processing systems
- Integration with external vehicle databases
- Real-time camera surveillance or mobile application functionality

1.5 Intended Audience

The intended audience for this elicitation process includes all stakeholders involved in or affected by the development of the campus ride-sharing platform and parking system at Multimedia University (MMU), Cyberjaya. These include:

- Students and faculty staff as main users of the system who will interact with features such as parking space viewing, space claiming, reporting, and ride booking
- System administrators, who can view reports, view car details and overwrite parking space.
- NICE MMU, who provides the API for Student ID, password and car details.
- Software development and design team, who will use the elicited requirements to design and implement the system

1.6 Overview

This documentation set consists of various documentation, including the project vision, context objects, elicitation plan and SRS (Software Requirements Specification), tailored for the development of a ride-sharing and parking management system for MMU student and staffs. The main important documents include the Elicitation plan, Kano model and SRS.

The proposed system is a Campus Smart Parking and Ride-Sharing Application designed for Multimedia University, Cyberjaya Campus. The system aims to streamline parking management and transportation for students, staff, and administrators alike. To do so the system integrates multiple features including real-time parking availability, ride-requesting, reporting of parking violations, and administrative tools for user and report management.

Due to its nature of being an integrated system in the MMU Mobile app, the platform leverages MMU's Single Sign-On (SSO) for secure authentication and integrates with university APIs to fetch user and registered vehicle data, preventing redundancy and enhancing security. It provides a mobile based interface to ease daily usage and supports interactive campus maps, location services, and real-time updates on parking and ride statuses.

In conclusion, this system aims to solve common campus mobility issues such as limited parking visibility, inefficient ride arrangements, and unmanaged parking violations. By digitizing and unifying these services, the project enhances user convenience, security, and administrative oversight within the campus environment.