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**CSE6224 SOFTWARE REQUIREMENTS ENGINEERING TRIMESTER 2510**

**PROJECT PART 1: Project Vision**

**Lecture section: TC1L**

**Tutorial section: TT3L**

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**Title:**

Campus Accessibility Navigation System with Facilities and Event Integration

**Project Description:**

This project involves creating an accessibility-focused navigation system for campus that integrates with the university's facilities management database and events calendar. The platform will provide accessible route planning across campus while incorporating real-time information about construction, elevator outages, and temporary accommodations for events.

**Deliverables / Outcomes**

The end result of this project will be a in-house application accessibility-focused campus navigation platform specifically designed for Multimedia University Cyberjaya. The platform will:

- Provide real-time, accessible route planning across campus.

- Integrate with facilities data to reflect construction, elevator outages, and accessibility barriers.

- Connect with the campus events calendar to recommend temporary accommodations and best routes during events.

Proposed domain name: www.accessmmu.my

This domain name promotes visibility and recognition for students, staff, and visitors seeking accessibility information within MMU Cyberjaya.

**Functionality & Technology**

**Functionality:**

- Route Planning: Users can find the most accessible routes across campus considering ramps, elevators, and obstructions.

- Live Alerts: Real-time updates on elevator outages, construction zones, and temporary closures.

- Event Awareness: Suggest alternate navigation paths or notify users about increased foot traffic and access limitations during university events.

- User Roles: Separate experiences for students, visitors, and facilities management.

**Technology Stack (Proposed):**

- Frontend: HTML5, CSS3, JavaScript (Vanilla or React.js if needed)  
- Backend: Python (Django Framework)  
- Database: PostgreSQL (recommended for Django)  
- APIs: Integration with MMU’s Facilities Management and Event Calendar APIs  
- Hosting: MMU internal servers, or cloud platforms like Heroku, PythonAnywhere, or Vercel for frontend  
- Map/Geolocation: Google Maps API or Leaflet.js for route visualization

Platform Access:  
- Accessible through desktop and mobile browsers via www.accessmmu.my  
- Future potential for a mobile app wrapper (e.g., using React Native)

**Audience**

**Target Audience:**

- Students and staff with mobility challenges

- Visitors unfamiliar with the campus

- Event coordinators and facilities staff

**Community Building:**

- Promote through MMU’s student portal and social media

- Engage accessibility clubs or student unions for feedback

- Collect user suggestions through a built-in feedback module

**Data, Information, Content**

**Core Data/Content:**

- Campus building and path layouts

- Accessibility asset data (ramps, elevators, lifts)

- Live updates on outages and maintenance

- University events calendar and venue details

**Data Sources:**

- Facilities Management Department (MMU): Elevator data, construction schedules

- Student Affairs / Events Coordination Office (MMU): Event schedules, venue data

- Campus GIS data (if available): For map plotting and routing

**Environmental Scan**

**Similar Projects:**

- AccessMap (University of Washington): Offers route planning focused on sidewalk slopes and mobility in urban settings.

- Wayfinding Apps for University Campuses (e.g., Rutgers, Stanford): Provide map-based navigation but often lack real-time accessibility integration.

- Google Maps Accessibility Layer: Includes wheelchair-accessible routes but lacks campus-specific real-time data.

**Unique Value of Our Project:**

Unlike general navigation systems, our platform focuses on real-time campus-specific accessibility—custom-built for MMU and tightly integrated with its events and facilities data.

**Partners**

**Institutional Partners:**

- Facilities Management Department, MMU Cyberjaya: Provide live data on maintenance, accessibility features, and outages.

- Events Office / Student Affairs: Supply information on campus events and temporary accessibility changes.

**Potential for future collaboration with:**

- Disability Support Services (MMU): Usability testing and advocacy

- ICT Department: System hosting, backend API support