UNIVERSITI TEKNOLOGI MARA

COLLEGE OF COMPUTING INFORMATICS AND MATHEMATICS

MOBILE TECHNOLOGY AND DEVELOPMENT (ICT602)

HOSPITAL LOCATION APPLICATION

FINAL REPORT DOCUMENTATION

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1. INTRODUCTION OF PROJECT'S BACKGROUND

This project develops a mobile application to enhance healthcare service accessibility through its integration of real-time tracking authentication and mapping systems. User location data reaches a remote server through auto GPS tracking and the application reveals where the user currently stands. Rapid medical service access becomes more accessible since the application both identifies nearby hospitals and health clinics and provides immediate medical location needs.

This project aligns with present-day mobile health implementation through mobile technology that strengthens medical care delivery. Medical aid becomes more accessible by implementing map-based services and real-time location monitoring which leads to enhanced user comfort through this application.

2. TARGET USER

- The general public together with patients need location-based help to locate nearby hospitals or clinics because they require speedy medical service access.
- Users with medical conditions combined with age risks can rely on the app to detect the closest healthcare facilities in emergencies.
- First Aiders together with Emergency Responders should utilize the platform to direct patients toward their nearest healthcare medical facility.
- Health Workers together with caregivers require quick access to hospital clinic locations when making patient referrals.
- The application assists individuals who have just moved to a new location and tourists who need guidance with medical care facilities.

3. CONTEXT OF THE APPLICATION

Through the integration of location-based services, the application delivers immediate health assistance. The application brings up user location information using real-time GPS coordinates which show current user positions. Medical emergency assistance is enabled through functionality that shows the closest accessible healthcare facilities to users during critical situations.

The application maintains an automatic process for GPS coordinate transmission and user detail communication with web servers which enables medical staff along with relevant authorities to access instant location data. The application provides users with a user-friendly experience through its straightforward login protocol and its straightforward mapping system. The application uses a GPS tracker and mobile technology to transform medical accessibility and emergency response times through its fundamental purpose.

4.   MOBILE USER CHARACTERISTICS

A designer must understand mobile user behavior while working on an effective application. The essential attributes that define mobile users involve:

- **On-the-Go Usage:**
  While users are in motion the application needs a simple format and quick responsiveness from its user interface. Emergencies require users to reach hospitals quickly so they need direct access.

- **Short Attention Span:**
  The application must supply information immediately to its users and a quick application launch should lead users to easy hospital location access.

- **Touch-Based Interaction:**
  The app requirements direct mobile touchscreen users toward accessible interfaces with user-friendly controls and map systems.

5. MOBILE DEVICE CHARACTERISTICS

The application focuses on mobile devices so developers need to analyze three main factors involving hardware and software features.

- **GPS & Location Services:**
  The application depends on GPS functionality to obtain current location information which allows it to show local hospitals. Users who operate Android devices need to allow the system to retrieve their location.

- **Screen Size Variability:**
  The user interface needs to adjust its display according to various display sizes including phone screens and tablet screens.

- **Internet Connectivity:**
  The application needs network connectivity to deliver GPS location points to its web server. The functionality of working offline would be improved by devising a system for storing location information locally.

- **Security & Authentication:**
  Secure login via Firebase Authentication or another secure method. User data protection, especially for location tracking.

6. CONCLUSION

The application optimizing usability and efficiency targets mobile user behavior through its well-designed user interface which delivers a smooth experience to people in urgent medical need. Three application reliability-improving components include the responsive UI design alongside low power consumption alongside a secure authentication system.

Mobile technology in the healthcare sector is growing stronger because this project offers a real-time and data-driven system for medical facility locations through its user-friendly approach. The application provides a beneficial solution through its intelligent navigation capabilities alongside automated features and web integration, which benefits users, healthcare providers, and emergency services.

The mobile user characteristics along with device constraints establish an application that functions well, operates efficiently, and creates meaningful results that solve real-world problems. This initiative demonstrates the vital role of technology in healthcare development as it establishes a safer medical support system with enhanced accessibility while responding more swimmingly to users worldwide.