DEVELOPMENT OF PROTOTYPE FOR CAMPUS MAP

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INTRODUCTION:

As per the prototype Campus Map is a digital navigation tool , a mobile based application designed to simplify campus exploration and enhance user experience.

- This prototype addresses the practical challenges of campus navigation and also underscores the importance of user-centric design in creating mobile application.
- The prototype automatically syncs navigation history and campus exploration details to users' devices, providing a comprehensive record of their daily and weekly campus activities.

SCOPE OF THE PROJECT:

To develop a prototype for a University Campus Map, we utilize mobile mapping applications(ISRO Map), GPS sensors, and campus-specific data integration, ensuring accurate and user- friendly navigation across the campus landscape. The scope of the project is also to gather the user requirements , analyse the requirements and conduct task analysis and usability testing. Implementation of this project is beyond our scope.

USER AND REQUIREMENT ANALYSIS:

The target users for a Campus map application would primarily be students, faculty, staff, and visitors navigating the campus.

Sub task	Interface Design	Justification
Route Guidance	Audio Instruction	Audio instruction provide directional cues helping users understand the layout of their surroundings and navigate effectively without needing to focus on a screen.
Search Events	Touchscreen	Provide tactile interaction with a touchscreen to view various events.
View Memories	Touchscreen	Provide tactile interaction with a touchscreen to view the memories (photos taken at that location).

LIMITATIONS WITH EXISTING DESIGN:

- Inefficient navigation and reliance on campus map for directions hinder seamless movement across university campus, leading to delays and frustration among users.
- Campus maps may not have enough details about the places or services available on campus, such as opening hours, contact numbers, accessibility or reviews, which may affect the user satisfaction.
- Campus apps are not updated with customized features for campus navigation such as indoor maps, shortest routes, parking availability, campus events.

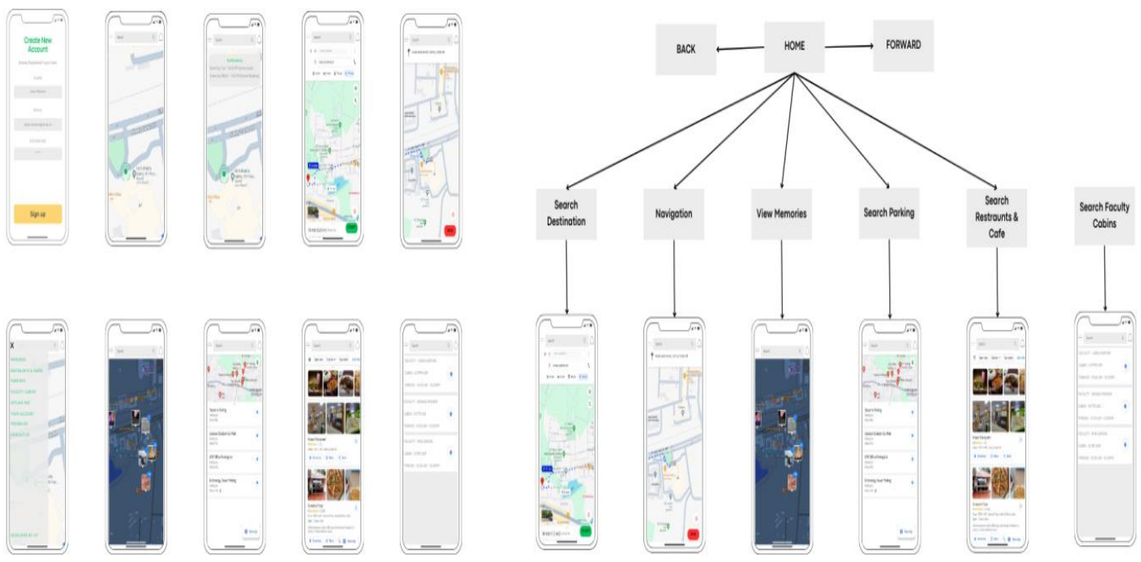
PROPOSED DESIGN CHANGES/CONSIDERATION:

- To make the campus maps compatible with other platforms we make use of HCI design principles that ensure the optimal layout, functionality and performance of the map.
- To update the campus map with customized features by using indoor mapping technologies such as Google, Apple Indoor Maps, Location-based services such as GPS, Wi-Fi or Bluetooth which provides real-time information on the user's position, direction, speed and distance.
- To provide the functionality of offering feedback, suggestions, rewards or allowing the user to create or share their own maps, routes and reviews use user-generated content (UGC) strategies to prevent errors and motivate user participation.
- Wireframes can help you make the campus maps accessible and inclusive by showing how to cater to diverse users and accommodate their needs, preferences and backgrounds with multilingual and multicultural support, text and colour contrast and audio and haptic feedback.

TASK ANALYSIS:

TASK	Search Destination
Goal/output	To improve User experience by offering intuitive and efficient navigation features
Inputs	Access to Real-time Campus Navigation
Assumptions	• Users know how to use the Navigation app • User successfully complete their navigation task
Steps	• User inputs Destination • App calculates optimal route • App provide Turn-by-Turn Directions
Time for experts	10-15 minutes
Instructions for users	• Enter destination address or block name • Follow on-screen Directions • Use navigation cues for guidance
Notes	Update Navigation app regularly for improved performance and accuracy

WIRE FRAMING:



PROTOTYPE AND EVALUATION:

RESULTS:

The data was collected from our campus community, targeting users who navigate the campus regularly. The prototype for the campus map app has been developed successfully. Many tasks were found to be easier for users, although one user suggested that improvements could be made to the prototype to eliminate the need for using multiple devices simultaneously. During scenario testing, users were able to successfully complete their navigation tasks.

REFERENCES:

https://www.canva.com/design/DAGDPGFGuA0/eGaU0GKm_Q76VRkTuQdRTA/edit