Team Name: HACK DIVAS

Problem Statement: Many mobile apps lack accessibility features, creating barriers for visually impaired users and potentially violating accessibility regulations. This exclusion hinders digital participation and misses market opportunities.

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Anjali Sharma (Member)

Brief about your solution

Explain your solution in 100 words or less

To Design intuitive, accessible app interfaces to comply with accessibility standards, prioritize multi-modal interaction, and embrace haptic feedback for empowering visually impaired users. Accessibility gaps in mobile apps marginalize visually impaired users, breaching regulations and impeding digital inclusivity, leading to missed market potential.Wherein our solution will effectively deal to outbound this shortcoming for differetially-abled peoples.

It Imminently works to capture the surrounding environment by user feed and location access and at the same time goes on updating the scenarios in accordance to machine learning trained models. It goes on informing either the user or their guardian their real-time whereabouts. Whilst one can locomote to retranch the accessibilty and normalise the facil working for rulely abled peoples.

Opportunities

- How different is it from any of the other existing ideas?

- **Customized Interface:** Our solution goes beyond general accessibility improvements by crafting interfaces specifically tailored for visually impaired users' needs, ensuring intuitive navigation and usability.This projects innovative strategy incorporates inclusive design principles, "appless" design paradigms, and multi-modal interaction features to create a more accessible and user-friendly app interface for visually impaired users.
- **Regulatory Compliance:** We prioritize adherence to accessibility regulations, ensuring that our apps not only meet user needs but also comply with legal standards, mitigating the risk of violations and legal consequences.Regular usability testing with visually impaired users allows it to gather direct feedback, identify accessibility barriers, and make targeted improvements to enhance accessibility compliance.
- **Enhanced User Experience:** By incorporating multi-modal interaction and haptic feedback, we aim to provide a more immersive and engaging experience for visually impaired users, surpassing traditional accessibility measures.The integration of haptic feedback and emphasis on simplicity, clear navigation, and intuitive layout demonstrate a commitment to enhancing the user experience and ensuring inclusivity.
- By prioritizing **web-based solutions and PWAs**, it transcends traditional app limitations, making our platform accessible across various devices and platforms.

Opportunities

- How will it be able to solve the problem?

- By its real time interaction with user to enhance data interoperability designing interfaces with accessibility as a primary consideration, it removes barriers for visually impaired users, enhancing digital participation.

- **Barrier Removal:** Our solution directly addresses the barriers faced by visually impaired users in accessing mobile apps, thereby facilitating their digital participation and inclusion.
- **Legal Assurance:** Compliance with accessibility regulations ensures that our apps are accessible to all users, reducing the risk of legal action and fostering a more inclusive digital environment
- **Market Expansion:** By tapping into the underserved market of visually impaired users, our solution opens up new opportunities for app developers to reach a wider audience and increase user engagement.

Opportunities

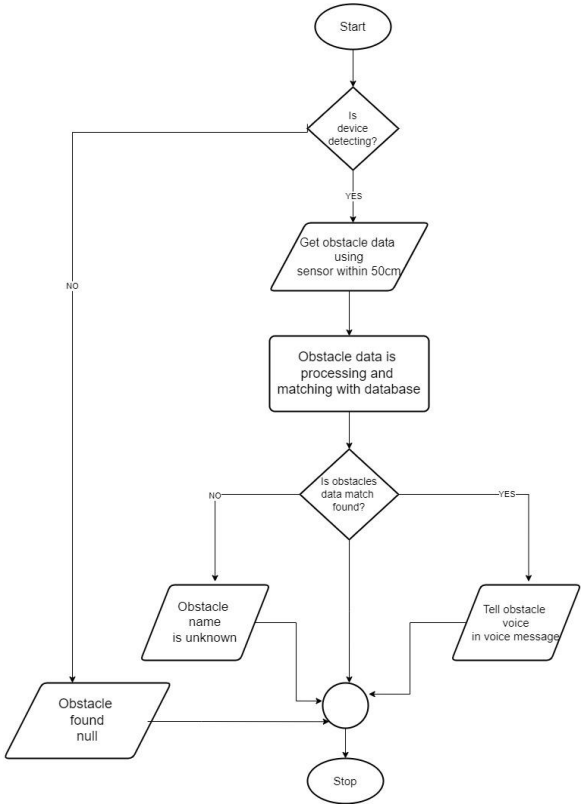
- USP of the proposed solution

- **Tailored Accessibility:** Our solution offers custom-designed interfaces optimized for visually impaired users, setting us apart from generic accessibility improvements.
- **Regulatory Compliance Focus:** We prioritize adherence to accessibility standards, providing reassurance to developers and users alike regarding legal compliance.
- **Enhanced User Experience:** Through the integration of multi-modal interaction and haptic feedback, we deliver a superior user experience that goes beyond basic accessibility features.

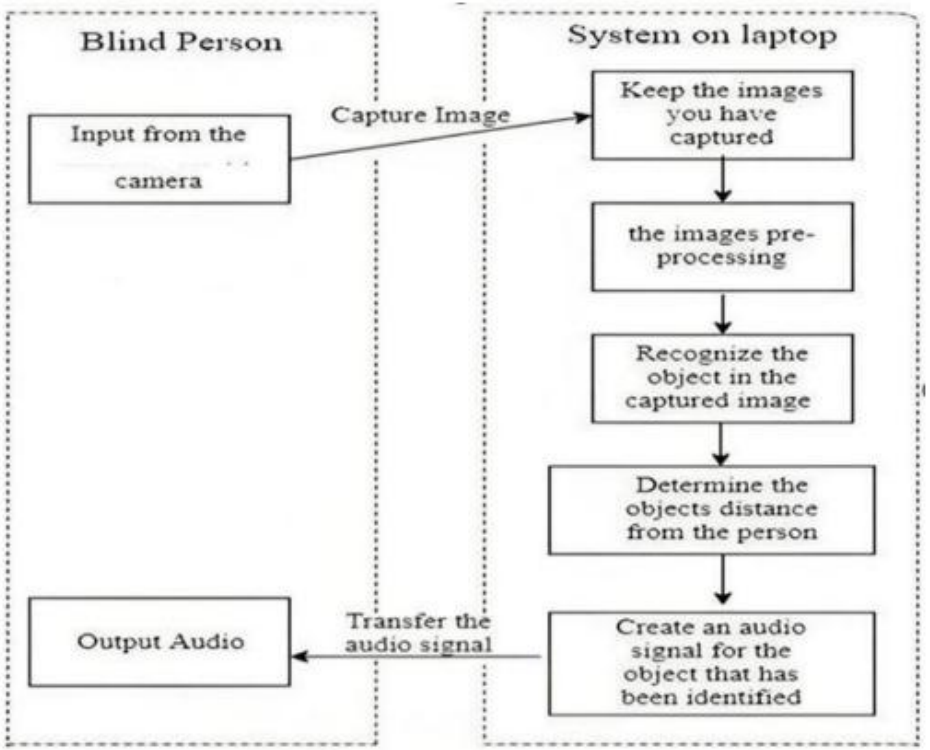
List of features offered by the solution

- **Customized Accessibility:** Our project offers tailor-made solutions specifically designed for visually impaired users, ensuring intuitive navigation and usability.
- **Regulatory Compliance Focus:** We prioritize adherence to accessibility regulations, providing legal assurance and reducing the risk of non-compliance.
- **Enhanced User Experience:** Integration of multi-modal interaction and haptic feedback elevates user engagement and satisfaction.
- **Direct Digital Accessibility:** Unlike existing solutions focused on physical accessibility, we target the digital realm, addressing the pressing need for inclusive mobile app interfaces.
- **Innovative Approach:** Our project goes beyond basic accessibility improvements, incorporating cutting-edge features to deliver a superior user experience.
- **Market Expansion Opportunity:** By tapping into the underserved market of visually impaired users, we unlock new opportunities for developers to reach a wider audience and enhance user engagement.

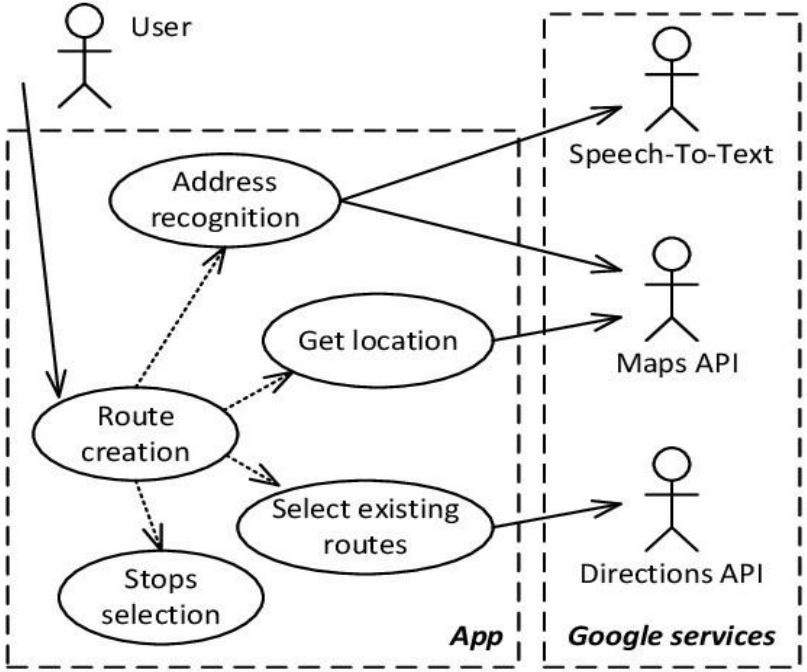
Process flow diagram or Use-case diagram



Wireframes/Mock diagrams of the proposed solution (optional)



Architecture diagram of the proposed solution



Technologies to be used in the solution

- Flutter : For building cross-platform applications to extend user reach to any kind of OS.
- Dart : Programming language to be used for Flutter App.
- Http/Rest API Libraries : Flutter packages like ‘http’ or ‘dio’ for handling API calls.
- State Management : Provider package for efficient state management.
- Firebase Cloud Services : For real-time database/cloud storage, authentication, hosting, notifications etc.
- Storage(Local/Repository) : Flutter packages of SQLite and shared-preferences
- Blockchain technology : for data theft security and ensuring user’s safety protocols
- Architecture/Design Pattern : MVC/MVVM/Repository.
- IDEs and Development Tools : VS Code/Android Studio.

Estimated implementation cost (optional)

Minimal Budget Plan for Implementing the Project:

1. Research and Development:
   - Conduct user research and accessibility assessments: $5,000
   - Design customized interfaces and accessibility features: $10,000
   - Develop and test prototypes: $15,000
2. Regulatory Compliance:
   - Hire accessibility consultants for compliance audit: $5,000
   - Implement necessary changes for compliance: $7,000
3. Technology Infrastructure:
   - Invest in development tools and software licenses: $3,000
   - Setup cloud hosting for app deployment: $2,000
4. Marketing and Outreach:
   - Create promotional materials and website: $3,000
   - Launch marketing campaigns targeting visually impaired communities: $5,000
5. Ongoing Maintenance and Support:
   - Allocate funds for continuous improvements and updates: $10,000 (annual)

Total Estimated Implementation Cost: $65,000

This budget plan outlines the essential expenses required to implement the project efficiently while ensuring compliance with accessibility regulations and delivering a high-quality user experience for visually impaired users.

Innovation & Impact

Competitive Advantage: Explain how your project stands out from similar solutions.

- **Targeted Scope:** While AccessNow focuses on mapping accessibility features of physical locations, our solution specifically addresses mobile app accessibility, catering to a different aspect of accessibility needs.
- **User-Centric Approach:** AccessNow promotes awareness of physical accessibility but may not directly improve digital accessibility for visually impaired users. In contrast, our solution directly tackles digital accessibility barriers through customized interfaces.
- **Innovative Features:** Unlike AccessNow, which primarily provides information, our solution incorporates interactive elements like multimodal interaction and haptic feedback, enhancing the user experience beyond mere information provision.
- AccessNow focuses on mapping accessibility features of physical locations.
- Our solution targets mobile app accessibility specifically, providing tailored interfaces.
- While AccessNow promotes accessibility awareness for physical spaces, our solution directly tackles digital accessibility barriers.

Potential Impact: Quantify the positive impact your project could have on the target audience.

- **Economic Empowerment:** By providing accessibility features tailored for visually impaired users, our project can enable them to access job opportunities, educational resources, and financial services, leading to greater economic independence and empowerment.
- **Educational Access:** Accessible mobile apps can facilitate learning and skill development for visually impaired individuals, leveling the playing field in education and fostering lifelong learning.
- **Health and Well-being:** Improved access to health-related apps and services can empower visually impaired users to better manage their health, leading to improved well-being and quality of life.
- **Civic Engagement:** Accessible mobile apps can enhance civic participation for visually impaired individuals, enabling them to access information, participate in elections, and engage with government services, thus promoting democracy and social inclusion.
- **Innovation Catalyst:** By promoting the development of accessible technologies and user interfaces, our project can drive innovation in the tech industry, leading to the creation of more inclusive products and services for users of all abilities.

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