

Upgradation of Jan-Dhan Darshak App

Domain Bucket : Software - Mobile App development

Category : Software

Organisation : Department of Financial Services

Problem Code : MK21

College Code : U-0493

Team Name : WHILE_LOOP

National Institute Of Technology, Agartala

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Problem Statement



The Department of Financial Services (DFS), Ministry of Finance and National Informatics Centre (NIC) have jointly developed a mobile app called Jan Dhan Darshak as a part of financial inclusion (FI) initiative. As the name suggests, this application acts as a guide for the common people in locating a financial service touch point at a given location in the country. Have a look at the additional application and develop an more featureful application that provides more insights and better recommendations.

Functionalities of the Existing App

In Main Page

- Fetches users location using GPS on launching the app.
- Allows users to locate ATMs, Branch, Bank Mitra, Post Office, CSC on the map.
- Enables users to view details of the selected object on the map.
- Allows users to switch languages between hindi and english.
- Allows users to clear graphics on the map and zoom in and zoom out.
- Results button to allow users to view list of results in the right navigation drawer.

In Navigation Drawer

- Options for users to provide feedback, missing bank suggestions, help requests, about us and disclaimer.

Features of Upgraded App

- Improved User Interface(UI) and User Experience(UX) by adding Google Maps API and reducing loading time and lagging by using caching.
- Fetches user location using network as well as GPS on launching the app.
- Allows users to locate ATMs, Branch, Bank Mitra, Post Office, CSC on the map.
- Supports 5 different regional languages specifically Hindi, English, Bengali, Gujarati and Urdu.
- Allows users to search for ATMs, Bank Mitra, Branch, PO and CSC using voice search enabled by Google Voice Assistant.
- Supports Voice Search functionality in 5 different regional languages specifically English, Hindi, Urdu, Bengali and Gujarati.
- Allows users to add locations(ATMs, Bank Mitra, Branch, PO, CSC) to favourites.

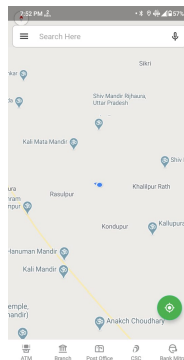
- Allows users to get directions and navigate to a ATM, Bank, Branch, PO or CSC.
- The Google Maps SDK and Location History(by Google) can be used to interact with user locations and maps. The Location module will allow the application to keep track of users location in real time and help in navigation.
- Improved UI for results list available for search query to the users.
- Filter feature to allow users to filter and better suggestions sorted by Relevance, Distance and Working Hours.
- Improved layout of details page available on selecting objects(ATMs, Bank Mitra, Branches, PO, CSC) including images, directions and share.
- Voice Read Out Results Feature to read the result for a search.
- The app will also provide a call option to enable user to call a bank branch, PO and CSC to enquire any query.

UI Improvements

- **Map Interface:** Improved maps UI by using Google Maps API instead of ArcGIS since database of ArcGIS is not publicly available.
- **Bottom bar:** Improved layout of bottom navigation bar used to locate nearby ATMs, Banks, Branches, POs and CSC.

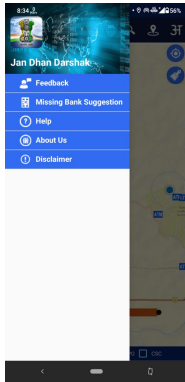


Existing UI

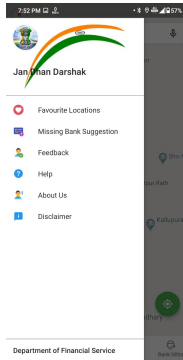


Improved UI

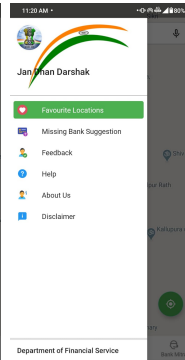
- **Navigation Drawer:** Improved Navigation Drawer layout and user experience by enabling swiping feature.



Existing Drawer

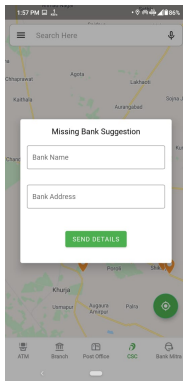


New Drawer

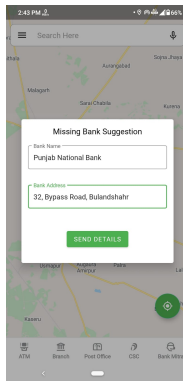


New Drawer

- **Navigation Drawer (Missing Bank Suggestion):** Added option for users to suggest missing banks

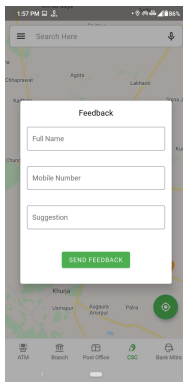


Missing Bank



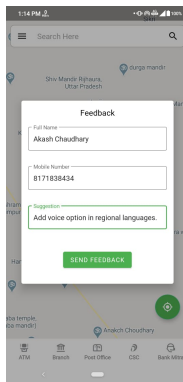
Missing Data

- **Navigation Drawer (Feedback):** Added Option of for users to give their feedback



A screenshot of a mobile application interface showing a map in the background. A white 'Feedback' dialog box is centered on the screen. It contains three input fields: 'Full Name', 'Mobile Number', and 'Suggestion'. Below these fields is a green button labeled 'SEND FEEDBACK'. The status bar at the top shows the time as 1:57 PM and 85% battery.

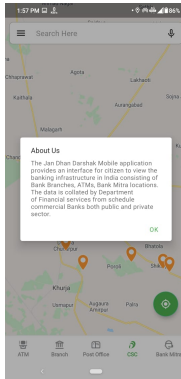
Feedback Form



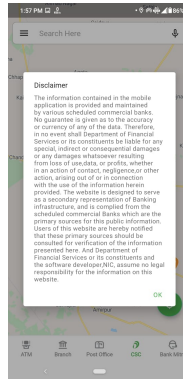
A screenshot of the same mobile application interface, but the 'Feedback' dialog box now displays the submitted data. The 'Full Name' field contains 'Akash Chaudhary', the 'Mobile Number' field contains '8171838434', and the 'Suggestion' field contains 'Add voice option in regional languages.'. The green 'SEND FEEDBACK' button remains at the bottom. The status bar at the top shows the time as 1:54 PM and 85% battery.

Feedback Data

- **Navigation Drawer (About Us and Disclaimer):** Added display text for About App and Disclaimer

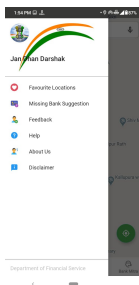


About Us

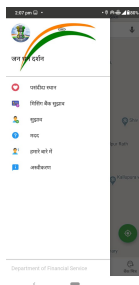


Disclaimer

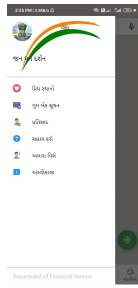
- **Localisation:** Allows users to view the app in 5 different regional languages namely English, Hindi, Bengali, Gujarati and Urdu



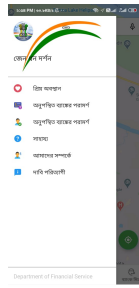
English



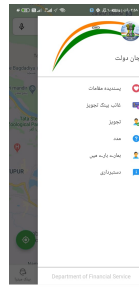
Hindi



Gujrati

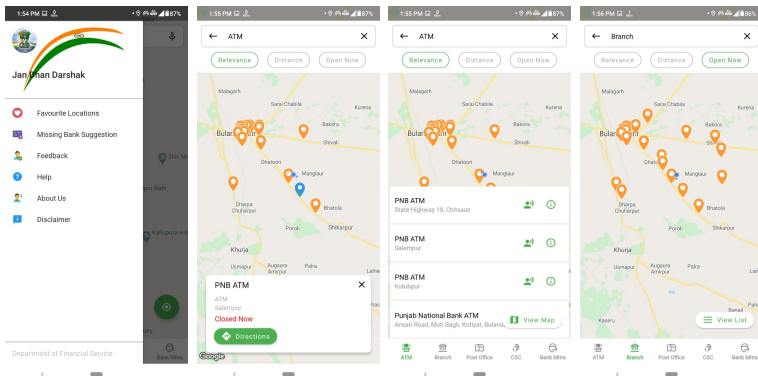


Bengali

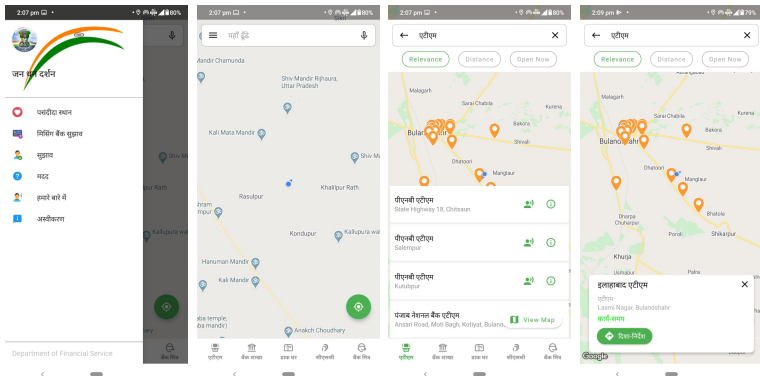


Urdu

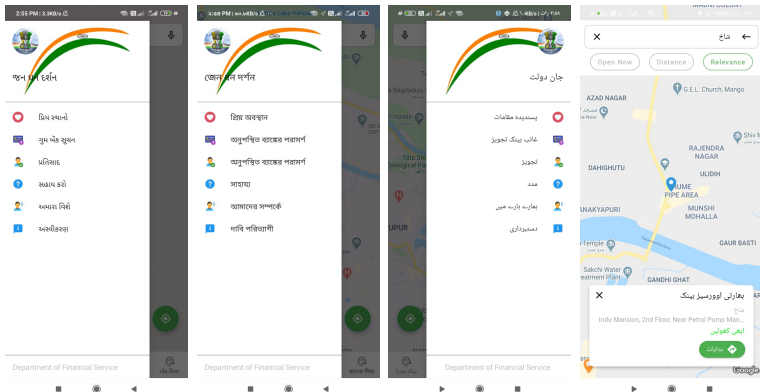
● Localisation: English



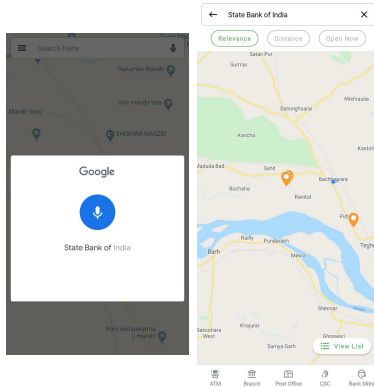
● Localisation: Hindi



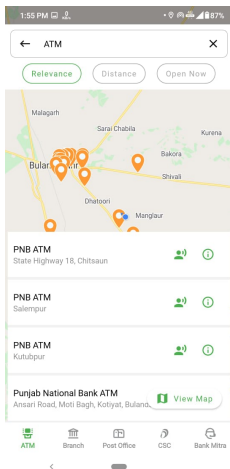
● Localisation: Bengali, Gujarati, Urdu



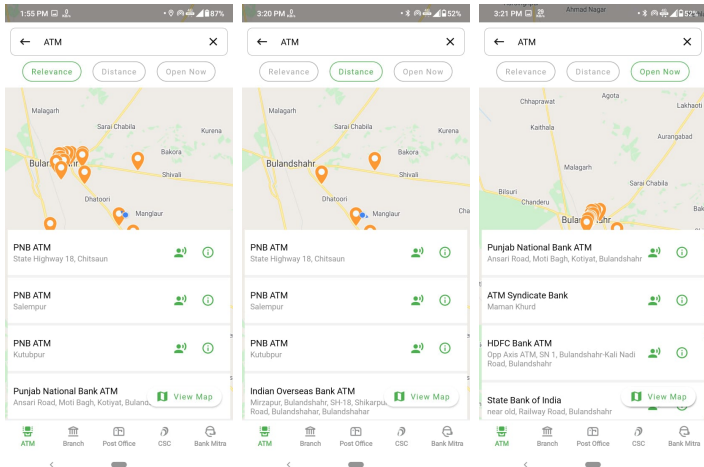
- **Voice Search :** The app allows users to use voice search facility in 5 different regional languages.



- **Voice Read Out Results Feature :** The read out feature reads out the results for the search to the user and also states distance and estimated walking time.



- **Sorting of Results** : Allows users to sort results as per Relevance, Distance and Working Hours

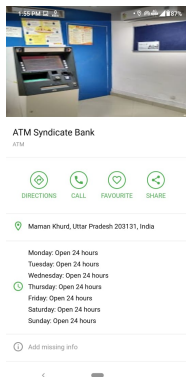


Relevance

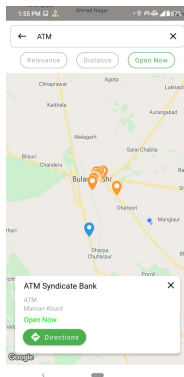
Distance

Working Hours

- **Object Details:** This feature improvement will allow users to view more details about the selected object including images, directions, call, favourite and share along with working hours for the bank.

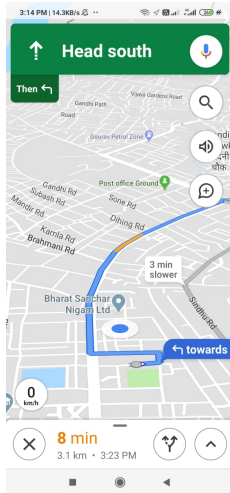


Complete Detail



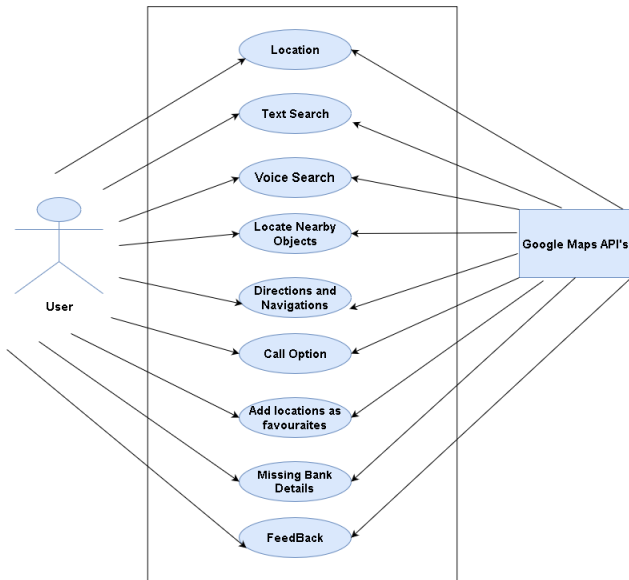
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- **Directions and Navigation:** The app will allow users to get directions and navigate to nearby by ATMs, Bank Mitra, Branches, PO and CSC.



- Frontend : XML
- Backend : Kotlin
- Application Development Environment : Android Studio
- Map and Location Provider : Google Maps API

Use Case Diagram



- Localisation to increase accessibility of the app.
- Voice search and Result read out feature adds to user convenience and simplicity.
- Navigation and Directions to allow users to easily navigate to destination.
- Result Filtering on basis of Relevance, Direction and Working Hours to reduce user problems.
- Working Hours details for users.
- Bank Details such as Images and facility to share location with others.
- Call feature to allow users to reach out to Banks, POs, Branches and Bank Mitra.