

Authenticated E-DOC Using Live Location

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Abstract -The availability of GPS tracking has brought many changes these days. Smartphones have this built-in location-based GPS feature that we use to display on maps. On Android operating systems, Google Maps API v2 is one of the available location-based APIs. This article is about using the Google Maps API V2 to create an application that should make it easier for the land office and people who want to buy land to get more accurate information about the land they want to buy. Using the phone's GPS, we can find the position to determine the coordinates of the points of the property that the buyer wants to buy. Main objective of this article is to obtain the accurate survey data of lots and reduce the problems of litigation that real estate agents or real estate agents cause against the buyers of these lots. The main advantages of this application are that it reduces ambiguity in package identification, it is accurate and reliable, it can reduce litigation problems, it can protect the buyer from losses, it can put an end to fraudulent activities.

Key Words: Global Positioning System (GPS), Google Maps API V2, Android, National Land Agency (NLA), Google Maps, Survey Department of Government.

1. INTRODUCTION

Surveys are used to determine boundaries and land features to determine ownership. The state surveying department inspects the land, establishes boundaries, and is assigned a property with specific survey numbers. They are used in construction projects ranging from building fences to building entire cities. The survey is necessary to collect data, the end result of which is data and information in the form of maps. This usually results in a paper form contains the administrative boundaries of land holdings, which are subject to change. If someone wants to buy land owned by others, he must first go to the offices that collect geodetic data and maps of that particular country, then manually go to that country and check measurements and other parameters. Sometimes a real estate agent or broker, who acts as an intermediary between the seller and the buyer, will sneakily step in to take advantage of the commissions and make a profit. Sometimes a land buyer who has bought land on which to build a house or start construction of a building is suddenly faced with the worst case scenario where others claim that this particular land is ours, the geodetic number for the plot is different, etc. The buyer will end up with problems and complaints. Information provided by the seller or broker is not 100% authentic, which can make the buyer despair. To counteract all these misleading activities, we have developed this app that provides you with all the information about the country that the buyer wants to buy so that the buyer does not get carried away with misconceptions and suffer losses.

2. LITERATURE SURVEY

1. Aydinoglu A C, Bovkir R.(2020) proposed a mobile application for smart real estate information. Successful land information management is an important issue for governments in regards to sustainable development. Reliable and comprehensive data about land and all related factors are essential for effective land policies. Various land related legal applications such as planning, taxation, property management, mortgage, and real estate investments require interoperable, extensive and realistic information about the land and real property. GIS provides greater insight into land by its capability to advance geographic analysis in different aspects. The statistical analysis capabilities of GIS increase the efficiency and accuracy of the evaluations related to land and real estate. Along with the developments of information and communication technologies, modern GIS technologies can handle large and complex data. Web-based and mobile GIS technologies provide the capability of operating and sharing local data and provide geographic analysis tools to users via the web. In this way, various mobile GIS applications can be developed in many different application areas. In this study, a mobile application titled as Smart Real Estate was developed for presenting urban real estate characteristics in different thematic groups by analysing data in different formats coming from different sources.

2. I Putu Gede Agus Andika Putra, Eko Sedyono, Adi Setiawan(2017) proposed an E-Land Design of Mobile Application for Land Information System Using Android-based Google Maps API V2. Mobile gadget with android operating system has a location-based feature that is useful to provide information displayed in a map. Google Maps API V2 is one of the location based APIs available within Android Operating System. This paper discusses the application design and utilization of Google Maps API V2 on the design of Android-based E-Land mobile application which aims to simplify the Land Office and the community in obtaining more accurate land area information. Utilization of GPS technology on mobile has a function to get location in performing a survey to determine the coordinate points of a ground area. The advantages of E-Land application is that we can easily access any information anywhere and a direct survey to determine the coordinates of the land area on the map is very easy to be done more accurately, besides the storage media is also very practical.

3. Ravi Singh Rana , Yugal Kumar , Dr. Dharmender Kumar (2018) proposed a Method and Techniques of Digitised Land Record Verification using Android Application. Mobile Communication is rapidly changing the life styles of people. We have seen vast deployments of mobile/Wireless technologies such as GSM and UMTS in last decade. About 70% of Indians have a mobile phone, which serves as a medium to remain connected but also a powerful mechanism for empowerment especially for rural population. Government and Industry bodies are trying to encourage the use of mobile phones as tool for delivering various services like information, banking and government schemes. Digitisation of land records are taking place across country. Many central and state agencies are involved in this process. This sometimes creates discrepancies in land records and cause problems for land owners. This application provides land owner with tools that can help resolve some of discrepancies related to land boundaries.

4. Phaisarn Jeefoo (2019) proposed a Real-time Field Survey Using Android-based Interface of Mobile GIS. In this paper the author has mainly introduced the implementation of Real-time field survey using Android-based interface of mobile GIS network. Real-time field survey and ground truth was made readily available for GIS researchers back in an office while a survey team was reporting from the field via a mobile network. Both geographic data and geo- referenced remotely sensed image data are served from this site. An interface application on the field survey and ground truth of Quick Bird remote sensing is also identified as further potential study.

5. M. Collotta, G. Pau, V. M. Salerno and G. Scata (2018) proposed an iOS Applications to Improve Learning and Management System in a University Campus. In their research work , the work on iOS application for university campus for iPhone, iPod touch and iPad has been done in order to simplify the livability of the university for students and officials of the university. The scope and features of the application have been discussed for the real-time events and activities associated with the university.

3. HELPFUL HINTS

In the proposed system, an Android application will be developed for the State Investigation Service. This app can be used by both government and property buyers. In this application you will find complete survey data and geographic location details of each parcel or property, owner information, owner pedigree, property shape etc. are correctly inputted into the server .When a shopper goes to a package, opens this app and then clicks a button, it will bring up the full information about that particular package with the exact survey number it's on. The buyer can also download the document, the entire document can be downloaded in one click and he can use this document in the future. There are mainly two modules offered in the offered system, one is the admin module and the other is the user module. In the Admin module there are two more sub- modules: the User Management module and the Provider Service Manager

(request service). In the Manage Users module, the admin can add, delete and view the users registered in the applications. In the Survey Provider Manager module, the admin can manage the service providers by adding the service provider details and the admin can also view the service providers. In the user form, registration and login form, the user needs to register and login in our application to view the application forms. The receipt notification form allows users to receive a notification of the confirmation message of access to the property details, and the property details request form is for request details provided by surveying departments, and the property/property details view form is used to request detailed View information about land or property. The Service Provider Manager module includes a login form that requires the service provider to login to the application to view the application modules. The View Request form is used by the service provider to view requests for access country details sent by the user and for sending notifications. It is used by the service provider to send a confirmation message to the user to enable the service to provide country details and the Form to provide country details where the service provider allows the user to access terrain details. The advantage of the proposed system is that it can reduce ambiguity in package identification, it is accurate and reliable, it can reduce disputes, it can protect the buyer from loss, and it can stop fraudulent activities.

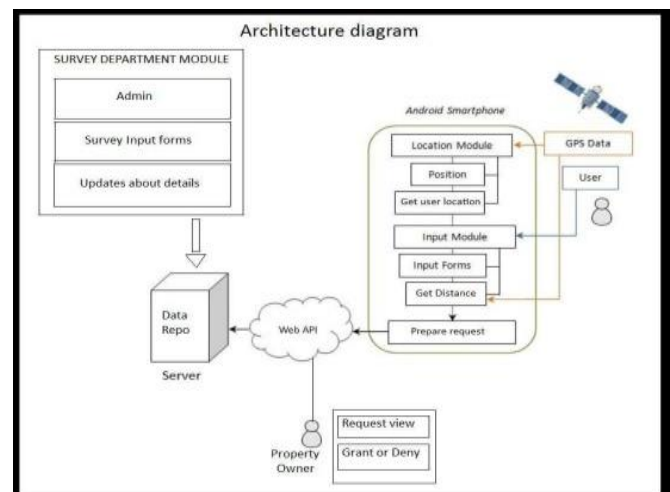


Fig.1. Architectural diagram

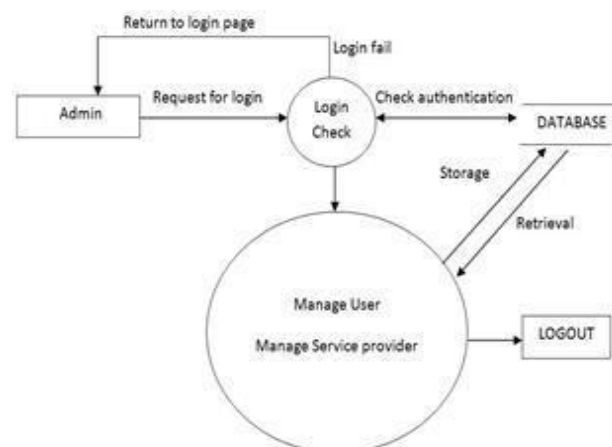


Fig. 2. DFD for Admin

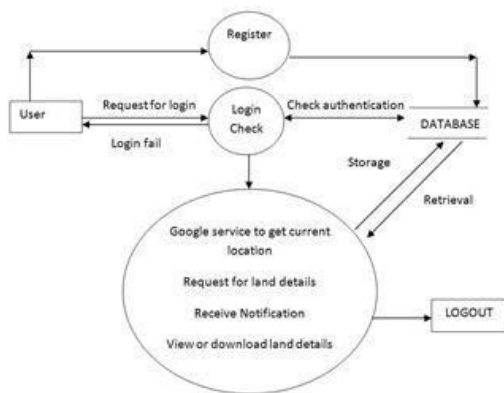



Fig. 3. DFD for user

In the proposed system, there are mainly two modules :

1. Admin modules: In Admin module there is two other sub-modules, they are Manage User module and Manager Service Provider (Survey Department.

a) Manage User module: In this module, admin can add, delete and view users registered into the application.

b) Manager Survey Provider module: In this module, admin can manage service providers by adding details of service providers and also admin can view service providers.

2. User modules:

a) Register and Login module: In this module,

b) Receive Notification module: In this module, users get notifications about the confirmation message to access the land details.

c) Request Land Details module: In this module, user can request for land details provided by survey departments.

d) View Plot or Land Details module: In this module, user can view details about the lands or plots.

The Manager Service Provider module contains Login Module where the service provider has to get logged-in to the application to view the app modules, View Request module is used by the service provider to view request sent

by user to access the land details, Send Notifications module is used by the service provider to send confirmation message to user for accepting service to provide land details and Provide Land Details module where the service provider allows the user to access the land details.

4.RESULTS AND DISCUSSION

Our android application is implemented using object-oriented programming language.

Following snapshots below show our application pages.

Fig. 4. Login page

Fig. 4, shows the Login page where both the admin and the user can login to the application.

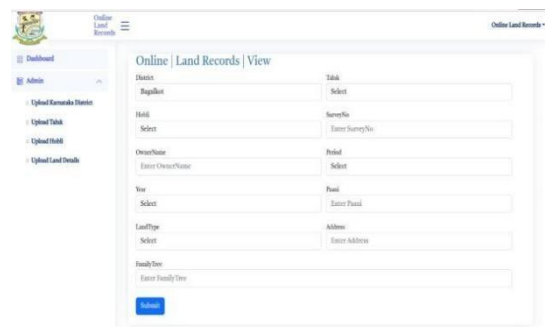


Fig. 5. Add new survey details

Fig. 5, shows Add New Survey Details page where the admin adds the new survey details of the land by giving details such as survey number of the land, its latitude and longitude, its radius, owner name, type of land e.g. Agriculture land, dimension of the land in acres, registration date and the address.

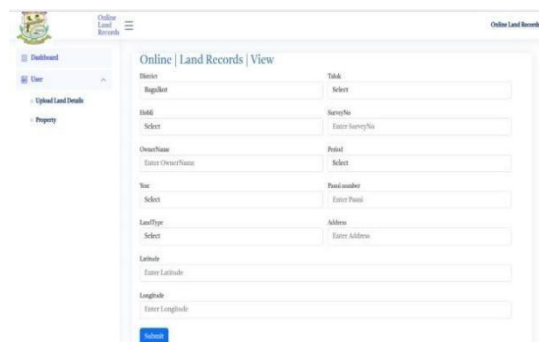


Fig. 6. Add buyer details

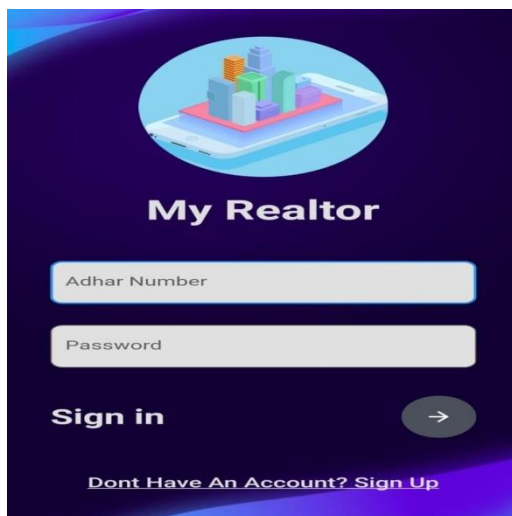
Fig. 6, shows the page to add the details of the buyer. This page takes the information such as parent survey number and new survey number of the land,

latitude and longitude, radius, dimension, address etc.



Fig. 7. View survey details

Fig. 7, shows the page to view the details of the buyer who wish to buy the land.



. Fig. 8. Mobile application

Fig. 8, shows the mobile application where user can sign in to the application.

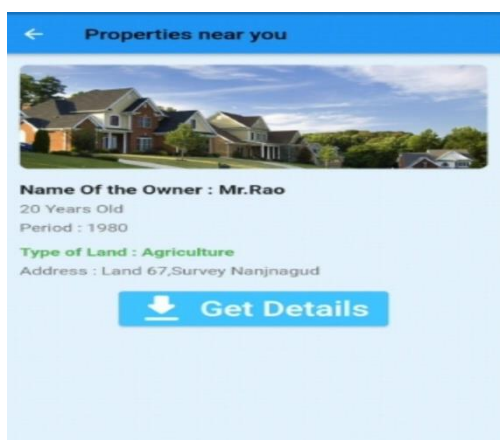


Fig. 9. Browse surveys

Fig. 9, shows the page where the buyer can browse the surveys

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