



CARRIER APP - EARN WHILE TRAVELLING

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Abstract: In our daily life, time and traffic is an obstacle for our daily activities like business, travelling or transportation and for each of the work to be done takes a lot of efforts for a person, and even pollution will be happened while we are travelling and all. In this paper, a person (Traveller/Rider) can earn while travelling. Traveller will carry the products from his starting point or on his way which is capable for him and deliver it within his destination. It reduces traffic, pollution, expenses and saves time that will be taken for a buyer to travel twice will be reduced to half and even that travelling will be carried by another person for him, and here all the buyer have to do is to pay the price to the traveller for carrying the product and saving the buyers time. Project implementation is in the form of mobile application with java language, XML, PHP, SQL, Firebase and using android studio software, it includes location details of product to be delivered (initial and end point) and the location details of the person(initial and end point), and that is how the interconnection between product and traveller inter-relate in our project that the traveller can choose the product within his destination only if the product is within his destination This app provides a way for the carrier to earn free income without any big risk, all that he have to do is to just carry the product within his destination.

Index Terms - Carrier App, Sender, Rider, Receiver, Live tracking, OTP, firebase, php, sql, xml, MD5, SHA1, authentication, encryption, decryption.

I. INTRODUCTION

The work that would be done with the app will be that a rider(traveller) can enter the location he is willing to travel and the products that will be pre-added by the sender to send to a particular destination and matches for the rider or within the rider destination will be displayed for the rider with details of product and shipping charge entered by the sender.

The rider can choose the products displayed for him in the app and after selection the rider can starts the journey and pick the product from the sender and travel with the product and deliver the product at the receivers destination which will be before the final destination of the traveller, and then get paid after verifying the product is safe and making sure that any other certain malpractices are not made by the rider during his shipping.

The product can be verified by the receiver by the methods like image recognition method, the image recognition method interrelated with the Artificial Intelligence and here the process is like capturing the image of the exact product by the sender before sending/handovering to rider, through the app facility for capturing image and the captured image will be evaluated with digital image processing and a set of measures from the captured image by the sender will be stored through the app and this stored image data will be cross checked by the captured image of the sender product from the receiver's app and both the digital images will be compared by the app and accuracy for the product will be done and if the accuracy is below the 65%-75% then the app display's issues regarding malpractices or product miss-placed and by that way the product security can be maintained.

The mechanism of LIVE tracking the rider by the sender as well as the receiver leads a stage of product security in which through the live tracking the average speed that the rider is travelling can be analyzed, the routes the rider travelling can also be tracked and if the rider stops the vehicle or change the path can be identified and notified to the sender or receiver, though the product security can be maintained and the chances for the rider to do malpractices will be reduced. The collection of data from the rider like government proof's like aadhaar, driving license, election id, etc are done at the stage of rider signup with CARRIER APP.

II. System design and implementation

The android studio platform is used for the app development , the Java Language, XML code, sql, php are further used in the implementation stages of the app.

At the time of sign up the user will be asked to enter his data's such as Full Name, E-mail Id, Phone number, etc and by entering send otp button the app checks whether all the fields are entered well and if any fields are empty then the message regarding the empty field will be shown to the user and these are done with java codes, and the layout which is in linear and button's details etc are done with XML code throughout the app's interfaces. After clicking send otp and if there is no issues like empty areas and all then the data's entered will be stored to firebase as well as server, the next stage is the verify otp process, here the entered number is cross checked for validation mechanisms and makes sure that the number is not entered twice and the ONE TIME PASSWORD (OTP) will be send to the registered number. The otp number is an automatic process from firebase and that number will be entered automatically by Automatic sms detection method and if the automatic detection method will not work then the user can type the otp manually, so adding a click listener the entered and verify button clicked otp number will be cross checked by firebase and when verification is successful it will display home else it will display an error. After the verification, the home page will be displayed, here the SENDER, RECEIVER, RIDER, LOGOUT are options that are shown to the user and the user can choose only one part at a time which could be the sender, rider or receiver. As per the user clicking on specific button the user will be directed to the part which is chosen by the user, When the Rider Button is chosen by the rider then he can add the source or starting point and the destination then product available for rider within rider starting and destination point will be shown on the app and the pickup location and delivery location will be shown after that, In the receiver side the receiver can get the detailed specification of the product which will be delivered by the rider and the live location, contact details of the rider etc will available at the receiver and the receiver can verify the product by taking the image of the product with app facility and the cross check the receiver image with the sender image of the product that is being sent with the rider and if there is no issue with the product then the receiver can pay the amount to the rider, In the sender part the sender can add the product details, the products starting and delivery point and product shipping charge and the sender capture the image of the product before handing it to the rider and the captured image will be cross checked with receiver image of product and the accuracy of the image will be made and if the product is 65%-75% above accurate then the product security and non product misplacement can be ensured.

In the Map case live tracking is done with the help of firebase and the location manager in it, and here the map collects datas of the product's starting and destination points and the rider starting and destination point, the product for the rider will be shown by sorting algorithms to find appropriate rider, the firebase has set of code to add datas like location, tracking, finding deviation in the rider estimated path, the tracking will be visible for the sender, rider and receiver where the sender and receiver can track the rider and if there is any deviation in the rider's path made by the rider then the sender as well as receiver can get notified regarding that the location details of the rider, receiver's details will be shown to the rider to reach at the product destination and the contact details of the receiver can be used by the rider to contact the receiver if there is any need to clear doubts regarding location or to inform any delays due to traffic and to contact when the rider is about to reach the destination and all.

The sql, php parts used for the backend of the applications for storing datas in the database. And to update the database. PHP code is used to manipulate the database. We mainly use three data tables in our database, one for verification with otp security and the next one store user data. It included a new entry of the user, and also stored all personnel information with a security proof. And the last table is for the entry of products which need to be delivered. The three tables are manipulated by post method so the data breaching can control. Php code used to control our database with maximum confidentiality and by data decryption

In the case User authentication our php code uses a continuous process of authentication including otp generation ,otp validation and finally creates a valid user. This is achieved by using switch case control structure.Otp generation is done using php function [mt_rand(1111,9999)] it is faster to generate random numbers rather than simple rand() function.

Next otp validation is done by using two variables \$auth and \$token. We collect user id, mobile number and otp from the application user by post method. And then check it in our database. The important part of authentication is done by using two "encryption methods" that are MD5 (Message Digest algorithm 5) and SHA1 (Secure hash algorithm). MD5 is used to build variable \$auth by decrypting the substrings of userid,mobile number and otp with a maximum length of 20 characters. Likewise the variable \$token is assigned by using the SHA1 encryption method. Then update the validation table by giving values to the attributes like authentication, token and also give status value to '1' from '0',i.e. value '1' is indicating it is a valid user, by default it is '0'. Finally the authentication process is successfully completed. The product table is updated by just using sql command in php code all our data transfer is done by post method, the user can easily enter the product details in our database from our android application also the rider will get a list view of our product table, by providing to select the desired product for the rider to deliver. So our application never compromises security for users and for their products.

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