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Automobile Service System

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Abstract: ***We are going to develop an app named Automobile Service System (AMSS) for the Automobile Service Center. By using the app a user can define their vehicle problems for servicing and do register/book slot in the nearby available Service Center. If the Service Center is not available then he/she can search for another. Here user fill the Job Card by own and forward it to the service advisor for booking. The service advisor fill the additional details of user's vehicle and again forward it to the user for confirmation. Then service advisor forward the job card task to the mechanic for servicing of user vehicle. Mechanic upload the service status of vehicle to user and forward the completed tasks report to the service advisor. Service bill is also generated by this append it send to the customer so he/she can pay using online transaction.***
Keywords: Automobile Service System, Vehicle Service Center, Servicing of Vehicle, Automobile Service, Vehicle Centers

I. INTRODUCTION

We are going to develop an app named Automobile Service System(AMSS) for the Automobile Service Center. By using the app a user can define their vehicle problems for servicing and do register/book slot in the nearby available Service Center. If the Service Center is not available then he/she can search for another. Here user fill the Job Card by own and forward it to the service advisor for booking. The service advisor fill the additional details of user's vehicle and again forward it to the user for confirmation of booking. When user confirm the booking of service then service advisor forward the job card task to the mechanic for servicing of user vehicle. Mechanic upload the service status of vehicle to user and forward the completed tasks report to the service advisor. Service bill is also autogenerated by this append and send it to the customer so he/she can pay using online transaction.

II. LITERATURE SURVEY

Iterate has developed Dealer Management System (DMS) under the name Auto Control. It automates all day to day activities of automobile distributorship/dealership and is an advanced software suite comprising of Presales and sales & Service and Spares module. It has two different versions.[1]

1) Windows based version which operates in Windows environment with multi user facility.
2) Web based version which works on internet environment and is browser based with ability to handle multiple outlets / branches of a single dealer/ multiple dealer.[1]

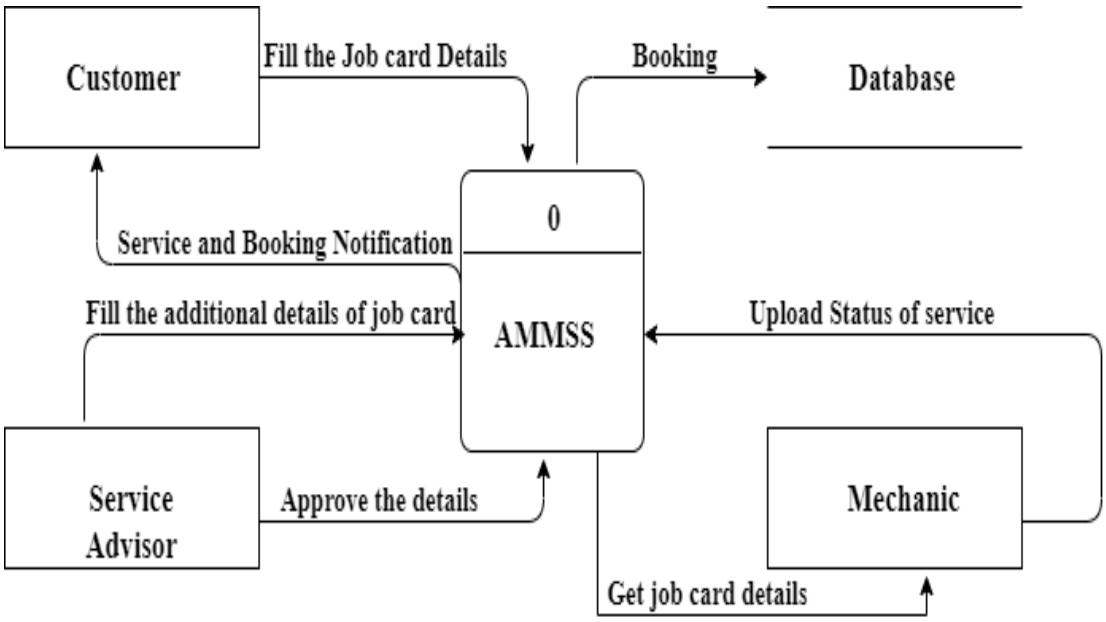
It helps in instantaneous flow of information and transactions from corner to corner dealerships enabling timely decision-making, precise recording and analysis of data at various levels.[1**]**

A. DMS has a Two Modules

1) *Pre sales and Sales Management System:* It is very comprehensive module designed to manage daily B2B and B2C activities. It contain everything you need for professionally managed Pre sales and Sales environment, no matter the number of enquiries generated, booking made or vehicles you sell.Very easy in use i.e. any non-computer savvy can work on it. It will be very help full instrument to grow your business in terms of profit and resources. It is capturing the information pertaining with whole sale car order, procurement of vehicle, prospective customer (Individual) enquiry details (Follow up details, Test Drive details, and Home Visit details), vehicle retail sale order and vehicle sell etc.Based on data captured through this module, one can extract various MIS (Management Information System) reports which contain valuable vital and meaningful information for decision making.
2) *Service and Spare Parts Management System:* It is another comprehensive module designed to manage day to day activities of automobile workshop for vehicle service and parts management. The service sub module takes care about the job card opening to billing. Also it will be a great tool to manage pre and post service customer care activities, which will enable the outlet in building a close relationship with their customer. In CRM(Customer Relationship Management) activity this module provides tried and trusted Service Reminders, Post Service Follow up activity etc.

3) *eNvent-DMS:* It covers following major modules of a automotive dealership i.e vehicle sales, spare part inventory, invoicing, human resource and accounts. Data inside the software is secure and accessible based on a highly scalable permissions hierarchy. The eNvent-DMS software system is best suited for automobile dealers, e-bikes vehicle and spare part dealers. It is unique automotive dealership management software designed to serve the daily operational requirements of a dealership. eNvent-DMS has proved to be the business manager for two wheelers dealerships. It covers complete sales cycle from advance booking to sales invoice generation. eNvent-DMS enables you to run you work shop in more organized and effective way with features like service booking in advance, job sheet opening, SMS alert, easy billing etc. eNvent DMS inventory management enables you to perform Item Management in the most detailed and thorough manner for easy controlling , classification and analysis of each inventory item.
4) *Dealer Management Simplified With Complete Visibility Into Day-Day Operations And Inventory:* Wipro's Dealer Management System (DMS) provides a centralized application to capture customer, vehicle and inventory information. The DMS covers pre-sales, vehicle sales, parts and spares, service, CRM, basic financial accounting and workflow automation with alerts. Manufacturers using the system access a simplified methodology to onboard and certify dealerships, better visibility into dealer operations, improved inventory management, customer conversions and customer retention along with a remote help desk.
5) *The Online Vehicle Service Center Management System Project:* Is a software application which avoids more manual hours that need to waste in record keeping and generating reports. This website keeps the data in a centralized way which is available to all the users at the same time. It is very easy to manage historical data in database. No specific training is required for the distributors to use this website. They can easily use the tool that decreases manual hours spending for normal things and hence increases the performance. It is very easy to record the information of online sales and purchases in the databases. As the number of customers and size of operations increases, the organization divides the geographical area into service areas and branch locations, to allow Engineers to be more responsive to the customer-needs.

III. METHODOLOGY



0^{th} Level DFD

In 0^{th} level DFD the flow of of AMSS is shown. It ensures that a Customer fill the Job Card by its own through application or through website and send it to the Service Advisor of Service Center. When the bike is deliverd to the Service Center the Service Advisor fill the additional details of customer's vehicle and again send it to the customer for confirmation. When the Customer confirm the Job Card. Service Advisor receive the Notification of confirmation and forward it to the Mechanic to do the Job/Service of Vehicle. Mechaanic Receive the Job and on completion of each job Mechanic use to Upload the Status of Work done to the Customer. So Customer can get the proper details of his/her vehicle service.

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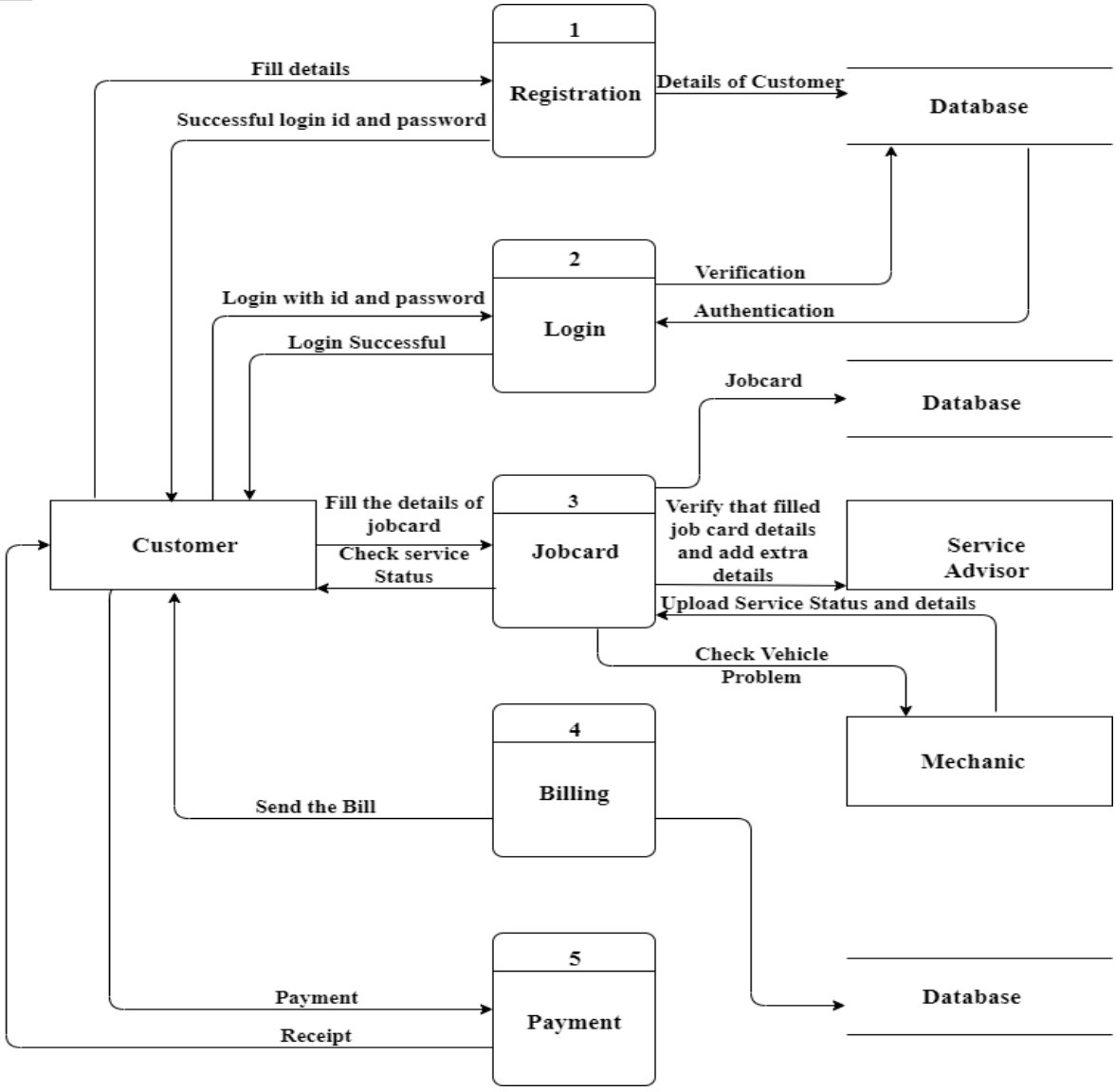

1st Level DFD

In the first level of DFD different module are explained in detailed. In the AMSS app and website the Customer first of all register himself/herself in nearby service center. Then the customer use to login by using the Mobile Number and Password.Verification and Authentication are done by app for successful Login After Login the Customer check the nearby available Sertvice Center and book the Slot for Service of Vehicle. After the confirmation of Slot Booking the Customer fill the Job Card with known details and send it to the Service Advisor of Service Center. The Service Advisor is another Module here. The Service Advisor use the Registered Mobile Number of Service Center to Login in the app or website. For Login the Service Advisor get OTP(One Time Password) for successful Login. After Login he can check the pre booking for sevice of vehicle and the can check the Job Card Submitted by different Customer for Service of Vehicle. When the Bike is delivered to the Service Center the Service Advisor fill the Additional Detail of Customer's Vehicle in the Job Card and again resend it to the Customer for Confirmation of Job. When the Customer Confirm the Job, the Service Advisor forward the confirmed Job Card to the Mechanic. Mechanic uses the Service Center Id and Password Allocated to Service Center to Login. The Mechanic Fetch the Confirmed Job Card and after Completion of each Job he can upload the Job Status to the Customer. By this Customer get the proper Notification of after each jon done which ensures the Customer that all the Service of Vehicle is done or not. After the Job Completion the Bill is Automatically generated by this append and the Service Advisor send it to the Customer for Payment. The Customer Pay the Bill by using Online Transaction or by visitin the Service Center.

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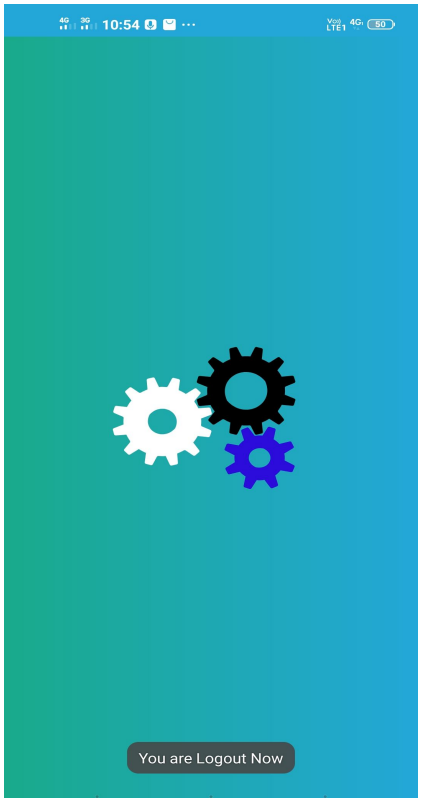
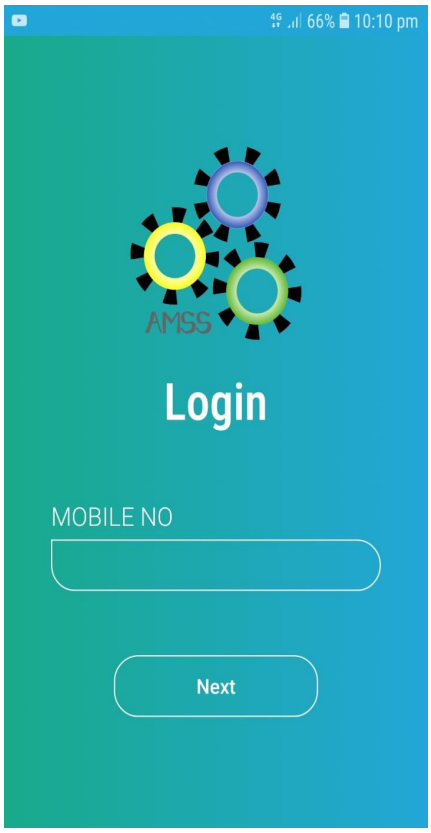
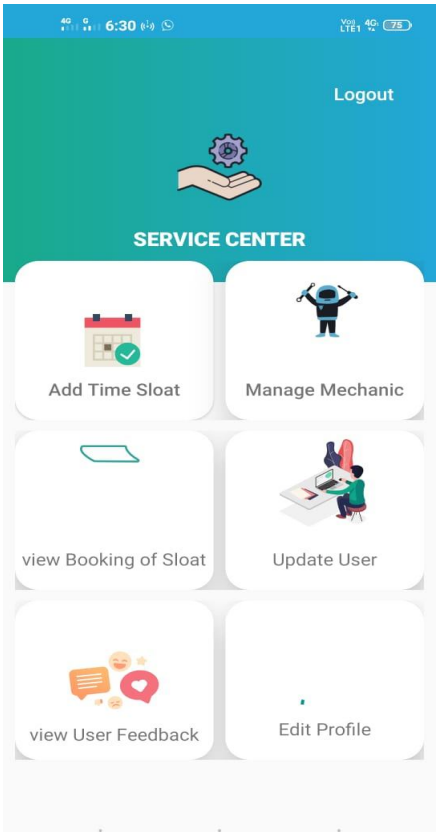
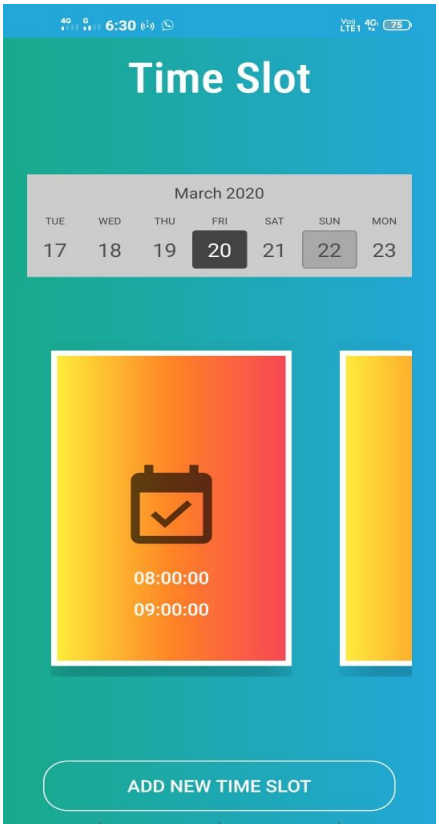
IV. IMPLEMENTATION









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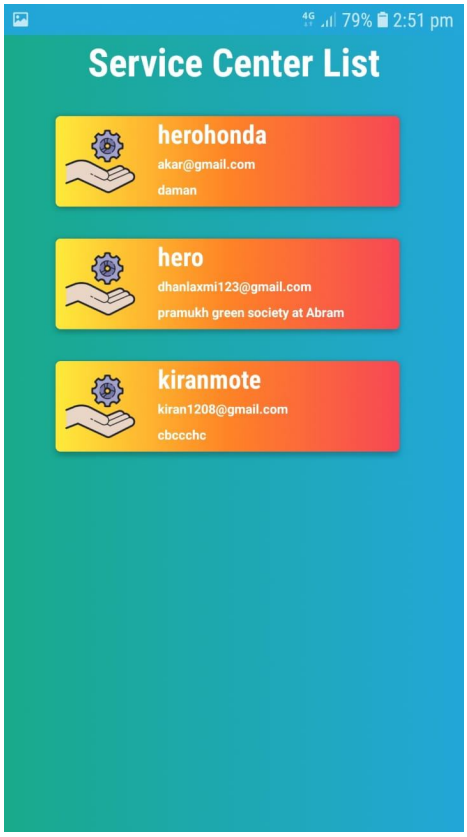

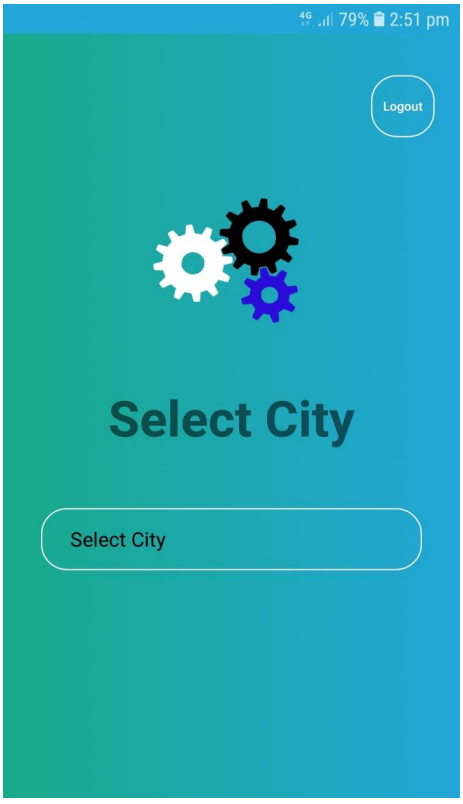

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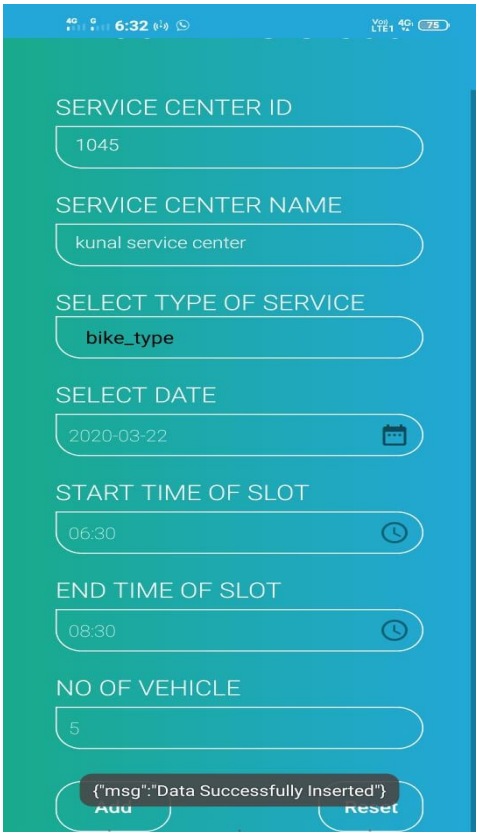

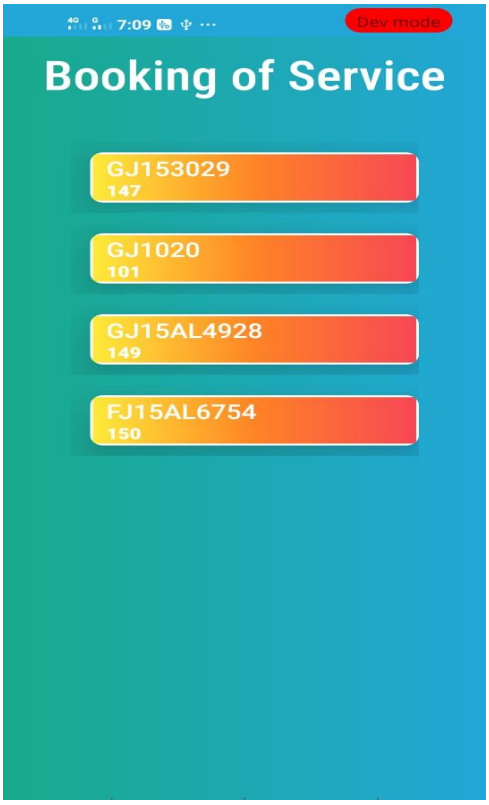

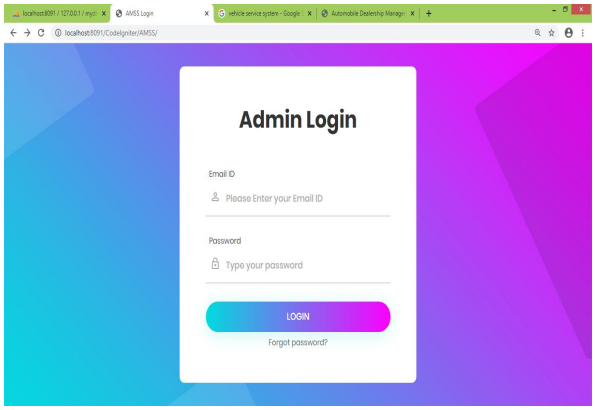

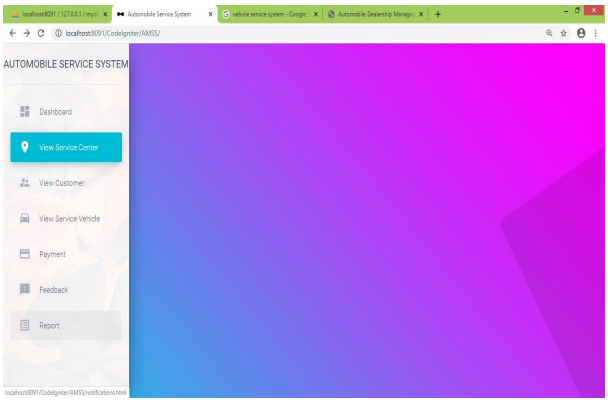

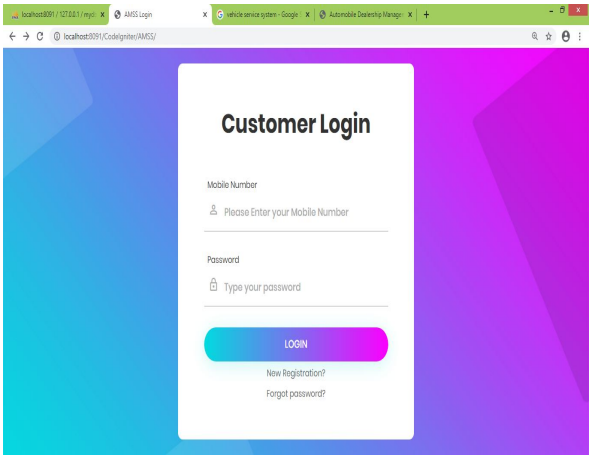

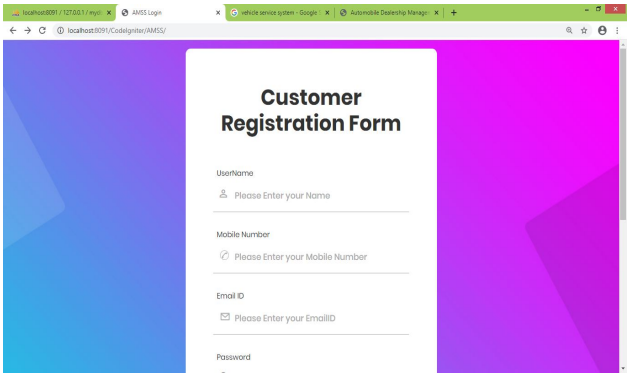

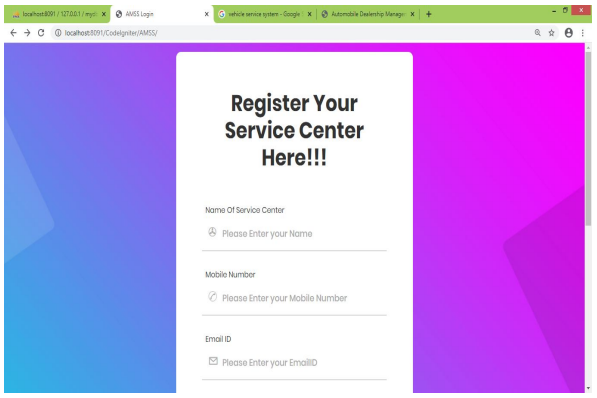

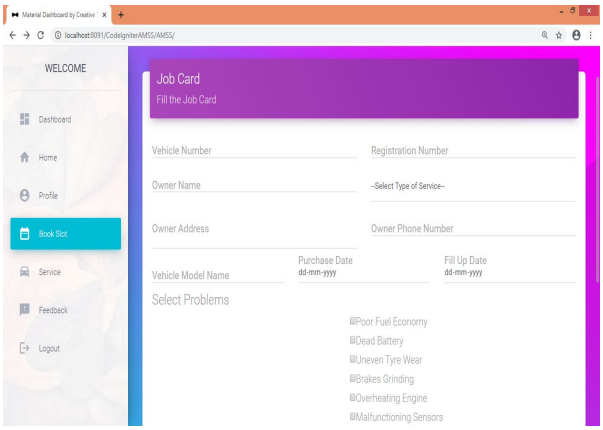

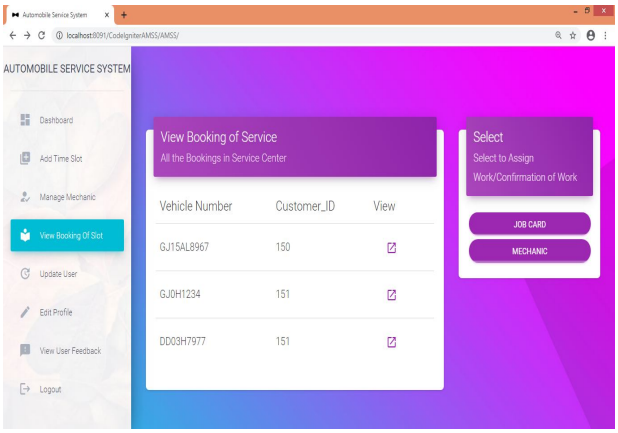

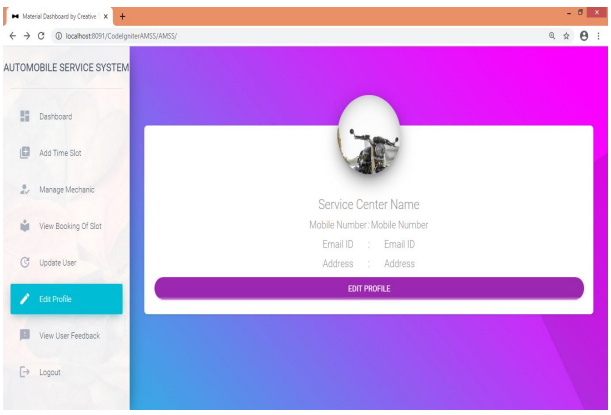

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V. CONCLUSION & FUTURE WORK

In this semester we have implemented our project using the Incremental Model where the product is designed, implemented and tested incrementally (a little more is added each time) until the product is finished. It involves both development and maintenance. The product is decomposed into a number of components, each of which is designed and built separately (termed as builds). We have completed all the documentation of project successfully. Here we have design both the Application and Website which is satisfying all the user requirement for the Booking, Servicing and Payment of their vehicle. In Future we are going to apply different testing and deploying the product in the real world.

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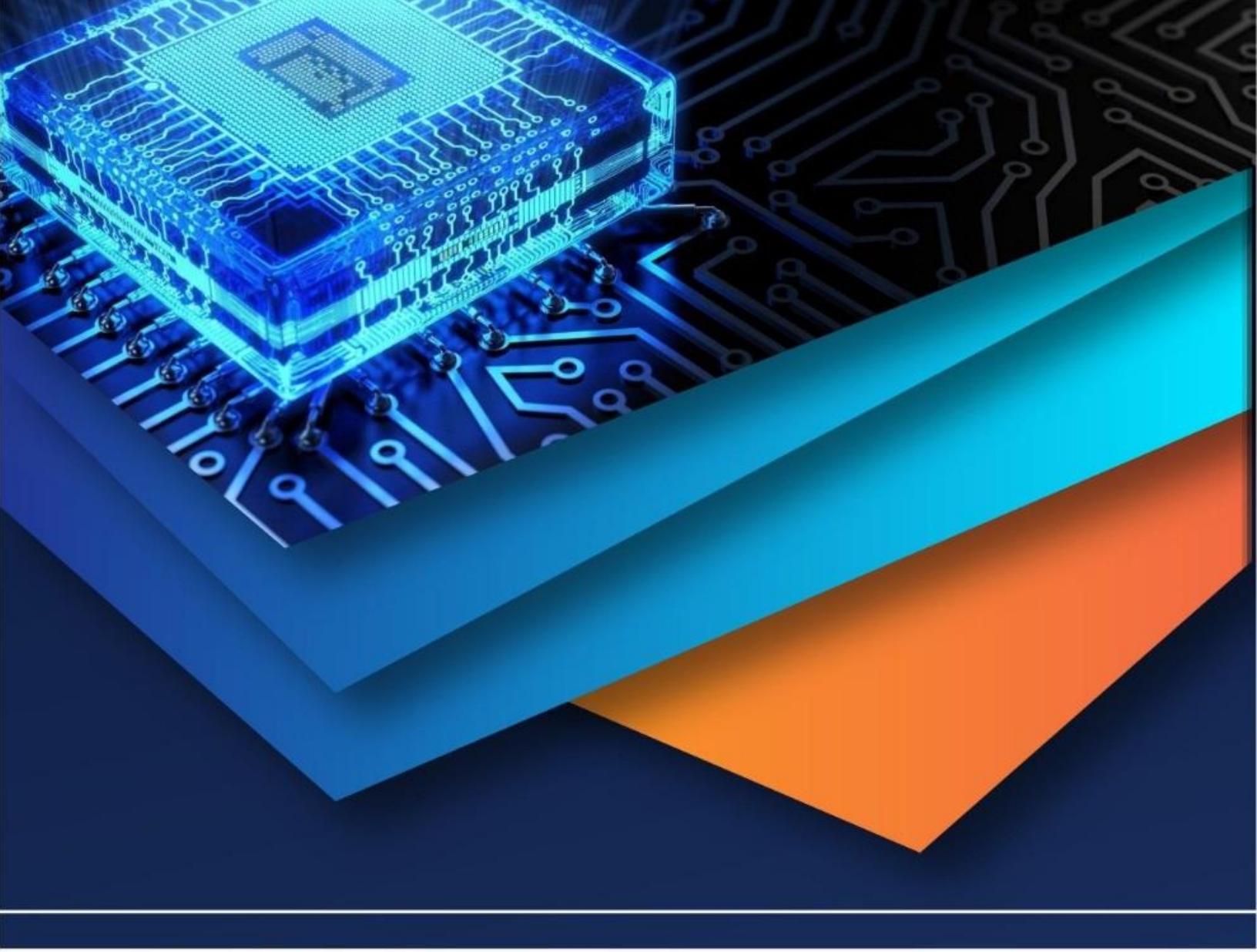

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