

UML AND TESTING TOOLS LAB

HARDWARE HUB

BATCH-15

*A Project report submitted in partial fulfilment of the requirements for the award
of the degree of*

**BACHELOR OF TECHNOLOGY
IN
INFORMATION TECHNOLOGY**

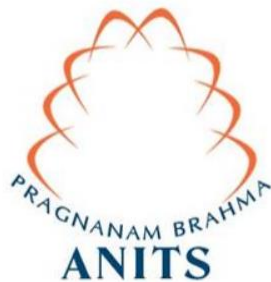
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We express our warm and sincere thanks for the encouragement, untiring guidance and the confidence she had shown in us. We are immensely indebted for her valuable guidance throughout our project.

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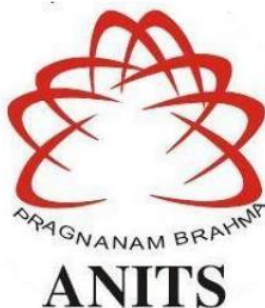
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**ANIL NEERUKONDA INSTITUTE OF TECHNOLOGY AND SCIENCES
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(Affiliated to AU, Approved by AICTE and Accredited by NBA & NAAC with 'A' Grade)

Sangivalasa, bheemili mandal, visakhapatnam dist.(A.P)



CERTIFICATE

This is to certify that the project reported entitled “HARDWARE HUB” submitted by **PANCHADA MANIKANTA , BEJJAM DIVYA , PAMPANA JESHWANTH , SURLA PAVAN KUMAR** in partial fulfilment of the requirements for the award of the degree of **Bachelor of Technology** in **Information Technology** of Anil Neerukonda Institute of technology and sciences, Visakhapatnam is a record of bonafide work carried out under my guidance and supervision.

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1.PROBLEM STATEMENT:

The idea of the project is there are two types of Customers 1.) service customer 2.) rental customer where we provide services for the service customers like AC repair, Washing machine, refrigerator, Water Purifier, Television, Fans, Switch Boards repairs etc.

where we provide tools like Backhoe, Excavator, Hydra Crane, Forklift, Dozer, Concrete Mixer Trucks, Pile Driller Machine etc for rental customers for rental also if needed for sale we take deposit amount before giving or renting tools for rental customers and return the deposit amount if there are no damages for tools while returning we also provide workers for rental customers if needed they charge for the work they done in time duration we maintain workers database which contains their contact details, address, aadhar, previous customers reviews ,the skill which they are expert at also,etc so we can assign customers the needed worker.

2.DESRIPTION:

The Integrated Hardware Services and Tools Rental Platform is an ambitious and innovative solution aimed at addressing the needs of two distinct customer groups: service customers and rental customers. This comprehensive platform is designed to revolutionize the way hardware services are accessed and tools are rented, making it a one-stop destination for all related needs.

Service Customer Features:

For Service Customers, the platform offers a wide array of services, including:

1. **Appliance Services:** This encompasses repair and maintenance services for essential household appliances such as air conditioners, washing machines, refrigerators, water purifiers, and televisions. Users can easily schedule repairs, view service history, and receive timely updates on service progress.
2. **Electrical Services:** From fixing switchboards to electrical system repairs, the platform provides access to skilled electricians who can efficiently address electrical issues, ensuring safety and convenience.
3. **Home Maintenance:** Beyond appliances and electrical systems, users can request services for general home maintenance, covering tasks like fan repair and other household repairs.
4. **Worker Matching:** Users can access a database of skilled workers, view their profiles, and select the right worker based on skills, previous customer reviews, and availability.

Rental Customer Features:

For Rental Customers, the platform offers an extensive range of heavy machinery and tools, including:

1. **Tool Rentals:** The platform provides access to a diverse range of tools and equipment such as backhoes, excavators, hydra cranes, forklifts, dozers, concrete mixer trucks, and pile driller machines. Rental customers can easily browse, select, and book the tools they require.
2. **Deposit and Sales:** For tools that are also available for sale, the platform facilitates a seamless transaction process. Rental customers can make a deposit when renting tools and receive a refund upon the undamaged return of the equipment.

3. **Worker Services:** Rental customers can also request skilled workers for assistance with their rented equipment. These workers are available for tasks related to the equipment, and their services are billed separately.

Worker Database:

The platform maintains a comprehensive worker database, which includes detailed profiles of skilled workers. This database contains their contact details, residential address, Aadhar information, previous customer reviews, and areas of expertise. The objective is to ensure that customers are matched with the right worker for their specific needs.

Key Benefits:

- **Convenience:** Users can access a wide range of services and tools through a single platform, eliminating the need to search for multiple providers.
- **Transparency:** The platform provides transparency in pricing, service history, and worker profiles, fostering trust among users.
- **Efficiency:** Both service and rental bookings are streamlined, enabling quick access to services and tools when needed.
- **Safety:** Skilled workers are vetted, and tools are regularly inspected to ensure safety standards are met.
- **Flexibility:** Users can choose from a variety of service providers and tools, enhancing flexibility in decision-making.
- **Feedback Loop:** The inclusion of user reviews and ratings for both services and tools allows for continuous improvement.

Project Goals:

The primary goals of this project are to:

- Create a user-friendly, intuitive platform accessible via web and mobile devices.
- Ensure data security and privacy for all user information.
- Establish a reliable netw...

3.SOFTWARE REQUIREMENTS SPECIFICATIONS(SRS):

1.INTRODUCTION

1.1 PURPOSE

The purpose of this Software Requirements Specification (SRS) document is outline the requirements for the development of "Hardware Hub." This comprehensive system caters to two primary user categories: Service Customers and Rental Customers. Service Customers can request various repair and maintenance services, while Rental Customers can rent or purchase heavy tools and machinery. Additionally, the system manages deposits, worker assignments, and maintains a worker database for efficient service provision.

1.2 SCOPE

The Hardware Hub system encompasses the following key features:

- **SERVICE BOOKING:** Service Customers can request a wide range of services such as AC repair, washing machine repair, refrigerator maintenance, electrical work, and more.
- **TOOL RENTALS AND SALES:** Rental Customers, typically businesses, can browse, rent, or purchase heavy tools and machinery, such as backhoes, excavators, forklifts, and more.
- DEPOSIT MANAGMENT:** For tool rentals and sales, the system manages deposit amounts and refunds them upon tool return in good condition.
- **WORKER MANGMENT:** Rental Customers can request skilled workers for specific tasks related to the rented tools, and the system facilitates the assignment process.
- **WORKER DATABASE:** The system maintains a comprehensive database of skilled workers, including their contact details, addresses, Aadhar information, previous customer reviews, and areas of expertise.

2.OVERALL DESCRIPTION

2.1 USER CLASSES AND CHARECTARISTICS

The system will have two primary user classes:

- **Service Customers:** Individuals or businesses seeking repair or maintenance services for appliances, electronics, or electrical work. They can request services, schedule appointments, and manage their accounts.
- **Rental Customers (Businesses):** Businesses in need of heavy tools and machinery for construction, excavation, or similar purposes. They can browse, rent, or purchase tools and machinery and request skilled workers if needed.

2.2 Operating Environment

The system will be web-based, accessible through standard web browsers, and mobile responsive for use on various devices.

2.3 Design and Implementation Constraints

- The system should be developed with scalability in mind to accommodate a growing user base.

- Implement robust security measures to protect user data, financial transactions, and tool inventories.
- Integration with payment gateways for secure payment processing.

3.SYSTEM FEATURES

3.1 Service Booking

- Service Customers can browse and select from a list of available services.
- Service requests should include details such as the type of service required, preferred date and time, and location.
- Service Providers can accept or reject service requests.

3.2 Tool Rentals and Sales

- Rental Customers can browse and search for available tools and machinery.
- Tools should be categorized and have detailed descriptions.
- Rental Customers can rent tools for specified durations or purchase them.
- Rental fees and purchase prices should be calculated based on the selection.

3.3 Deposit Management

- The system should manage deposit amounts for tool rentals and sales.
- Deposits will be refunded to Rental Customers upon the return of tools in good condition.
- Deductions may be made from the deposit for damages or late returns.

3.4 Worker Assignment

- Rental Customers can request skilled workers for specific tasks related to the rented tools.
- The system facilitates the assignment process, ensuring the right worker is assigned to the job.

3.5 Worker Database

- Maintain a comprehensive database of skilled workers.
- Include worker contact details, addresses, Aadhar information, previous customer reviews, and areas of expertise.
- Use this database to efficiently assign workers to tasks.

3.6 User Authentication and Authorization

- Users must register and log in to access the system.
- Different user roles (Service Customers, Rental Customers) with varying levels of access should be implemented.

3.7 Payment Processing

- Support secure online payments for service bookings, tool rentals, tool purchases, and worker services.

- Multiple payment methods (credit card, PayPal, etc.) should be integrated.

3.8 Notifications

- Send email or SMS notifications to users for service appointment confirmations, order updates, and deposit refunds.
- Notifications should be configurable by users.

4.EXTERNAL INTERFACES

4.1 Payment Gateway

Integrate with a secure payment gateway to process financial transactions.

4.2Email/SMS Service

Utilize email and SMS services for sending notifications to users.

5.FUNCTIONAL REQUIRMENTS

5.1 Security

- Ensure data security, including encryption of sensitive information.
- Implement access controls to protect user data.

5.2 Performance

- The system should be responsive and provide quick access to services, tools, and worker assignments.
- Handle concurrent user requests efficiently.

5.3 Scalability

- Design the system to accommodate an increasing number of users, tools, and workers.

5.4 Usability

- The user interface should be intuitive and user-friendly.

6. APPENDICIES

Include any additional information or diagrams that help clarify system requirements.

7.GROSSARY

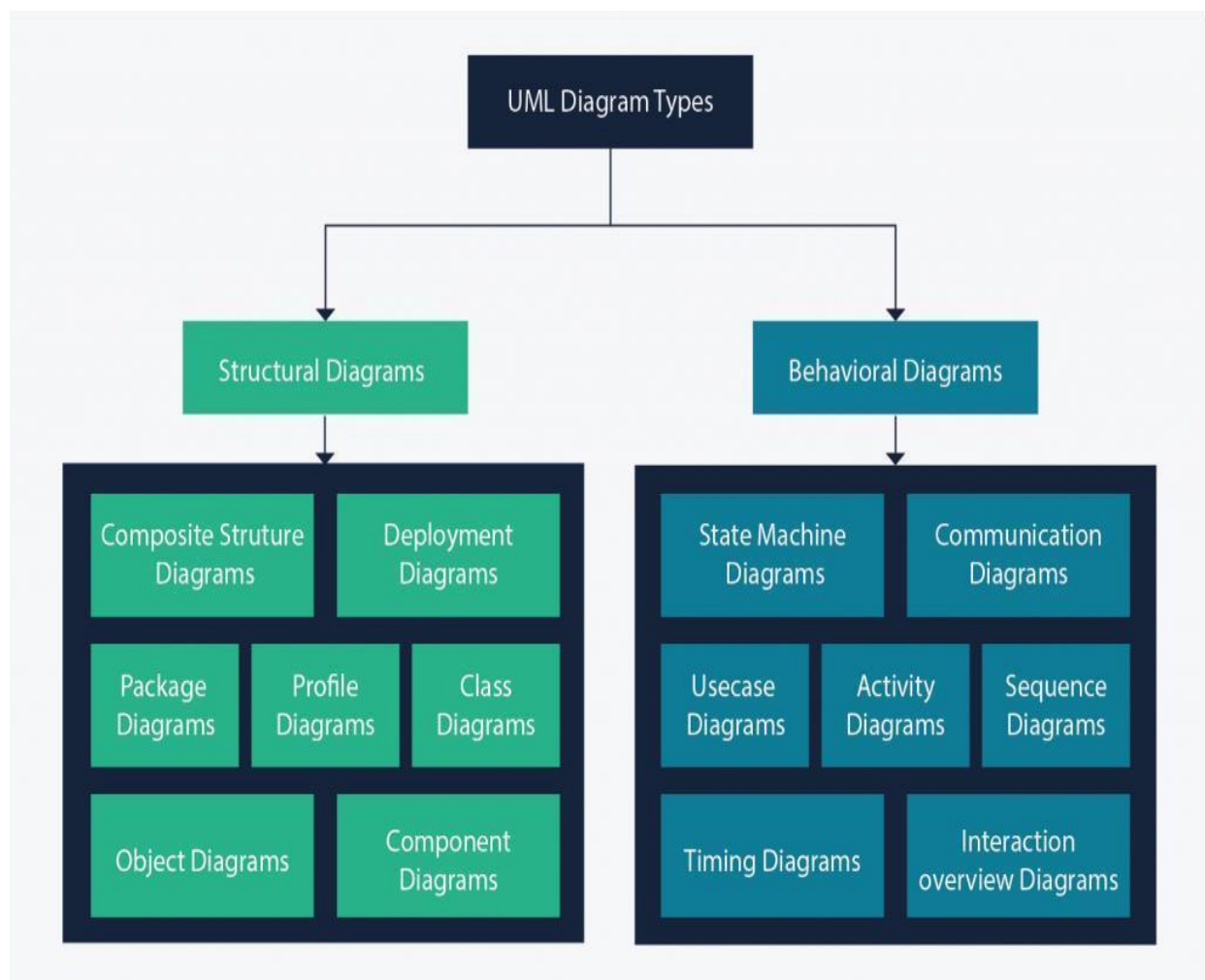
Provide definitions for technical terms and abbreviations used throughout the document.

This Software Requirements Specification serves as a comprehensive reference for the development of the Hardware Hub system. It outlines essential features and requirements to ensure a successful project implementation

4.UML DIAGRAMS

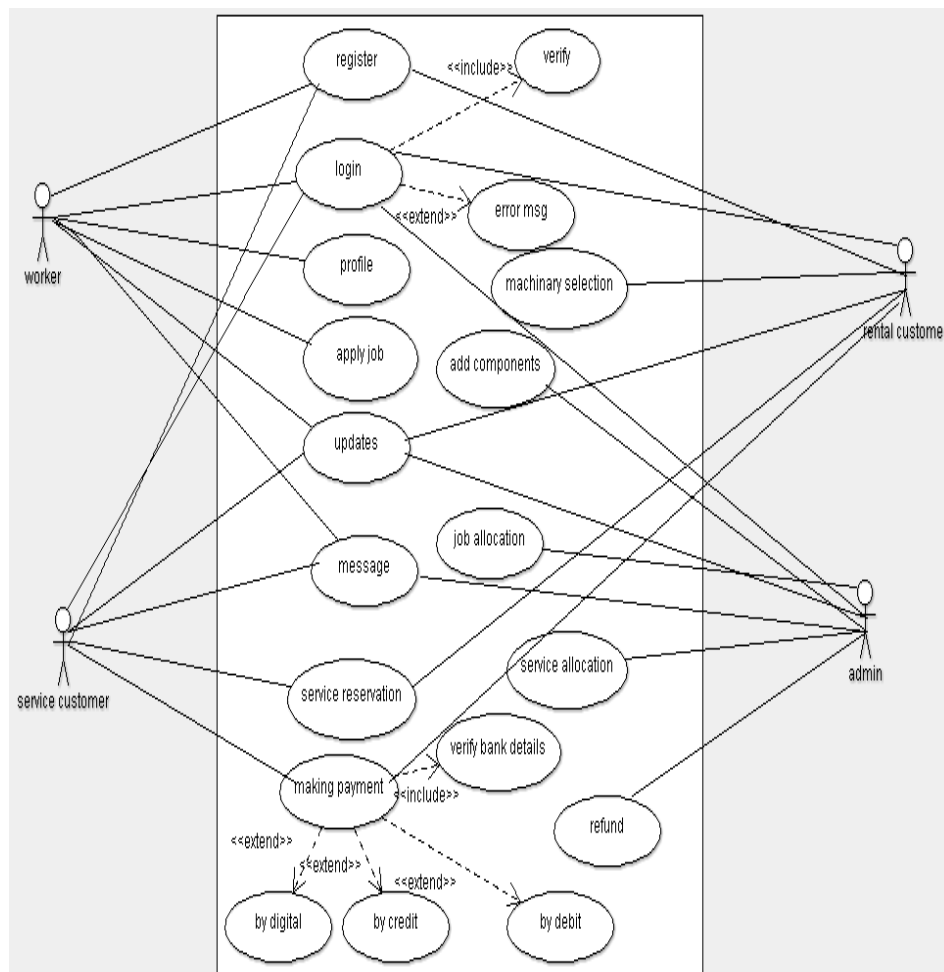
UML stands for Unified Modelling Language. It's a rich language to model software solutions, application structures, system behaviour and business processes. There are 14 UML diagram types to help you model these behaviours.

Structure diagrams show the things in the modelled system. In a more technical term, they show different objects in a system. Behaviour diagrams show what should happen in a system. They describe how the objects interact with each other to create a functioning system



1.USE CASE DIAGRAM:

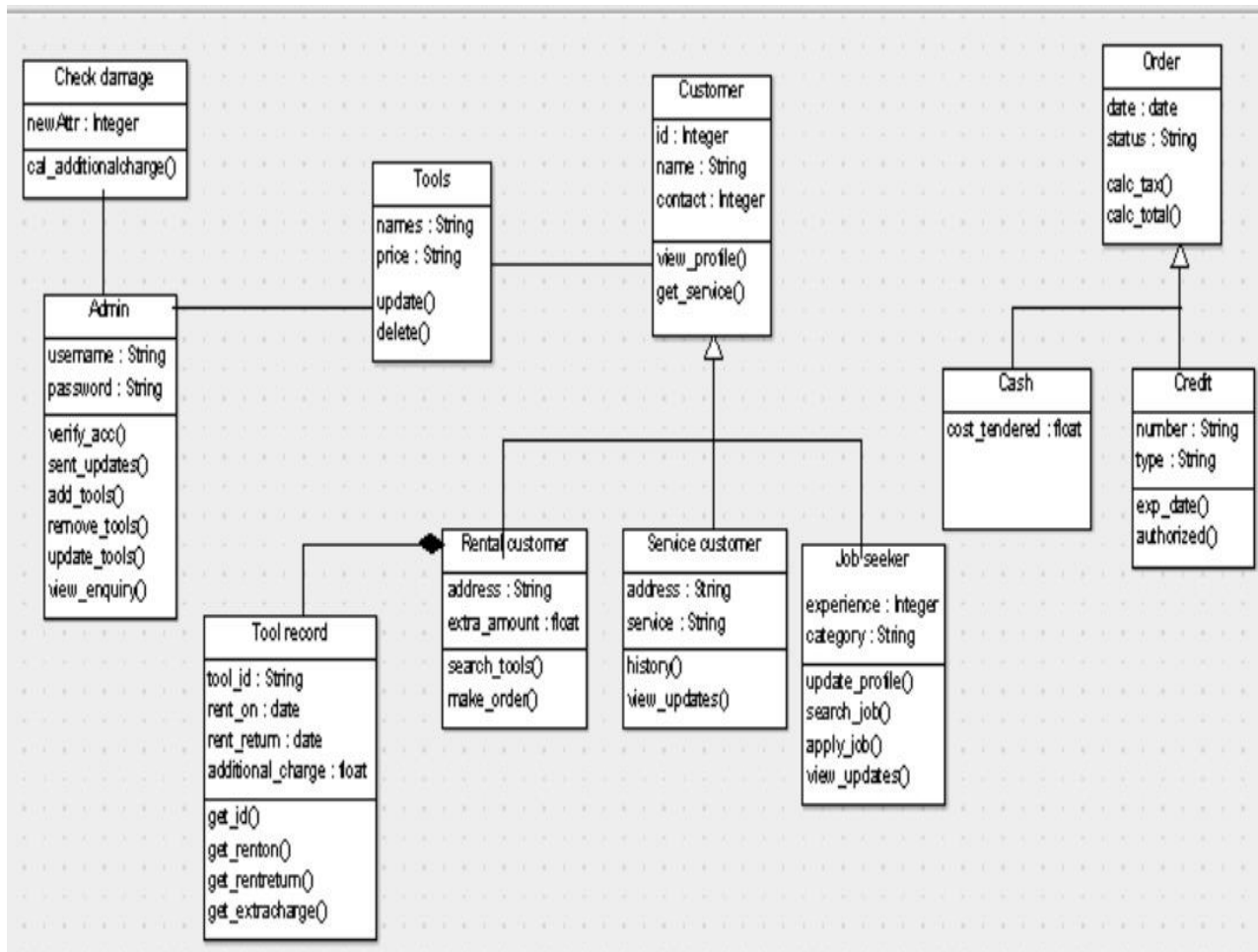
A use case diagram is used to represent the dynamic behaviour of a system. It encapsulates the system's functionality by incorporating use cases, actors, and their relationships. It models the tasks, services, and functions required by a system/subsystem of an application. It depicts the high-level functionality of a system and also tells how the user handle .



2.CLASS DIAGRAM:

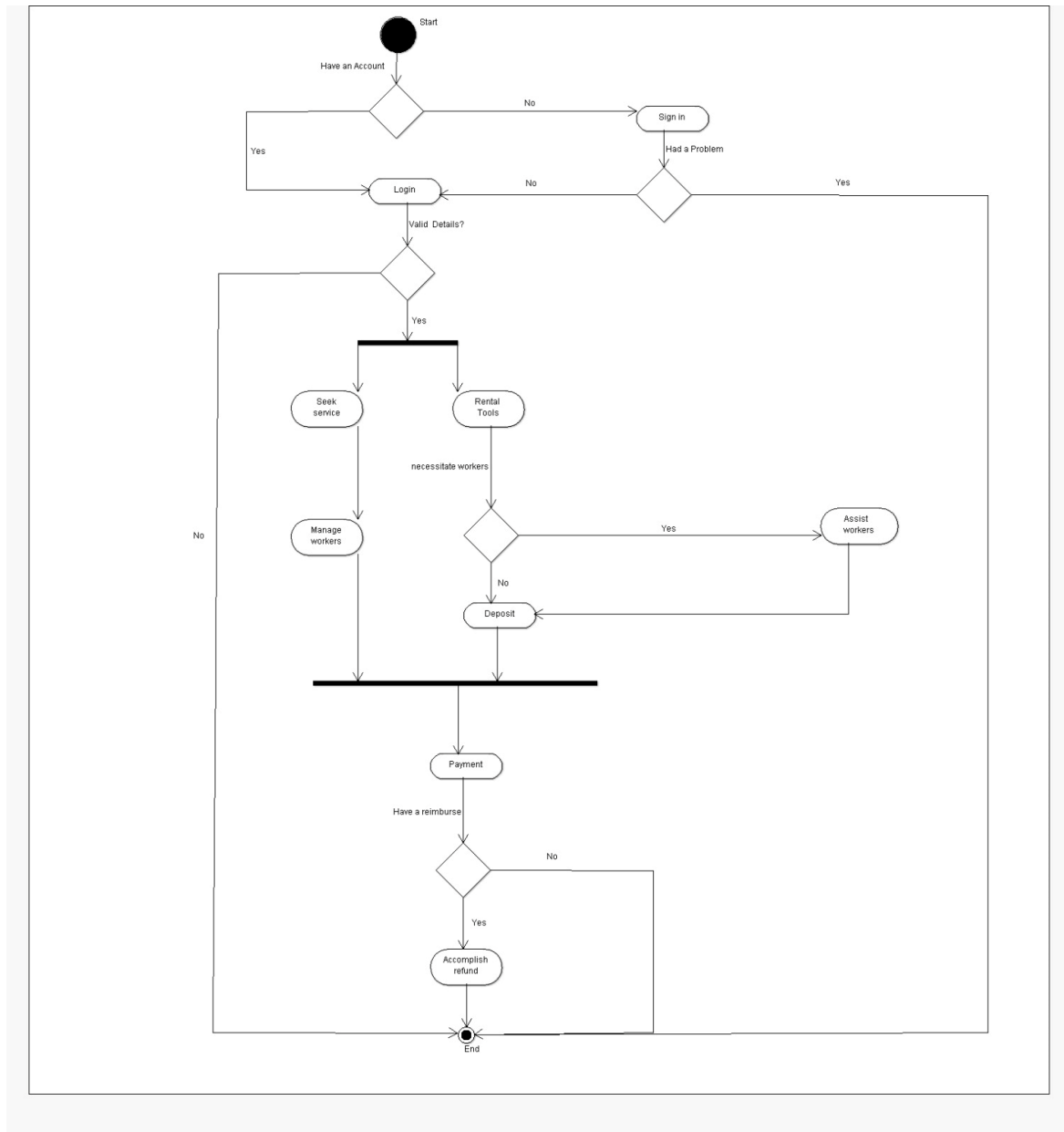
Class diagram is a static diagram. It represents the static view of an application. Class diagram is not only used for visualizing, describing, and documenting different aspects of a system but also for constructing executable code of the software application.

- In this class diagram we have 4 Classes-rental customer, service customer , worker , admin



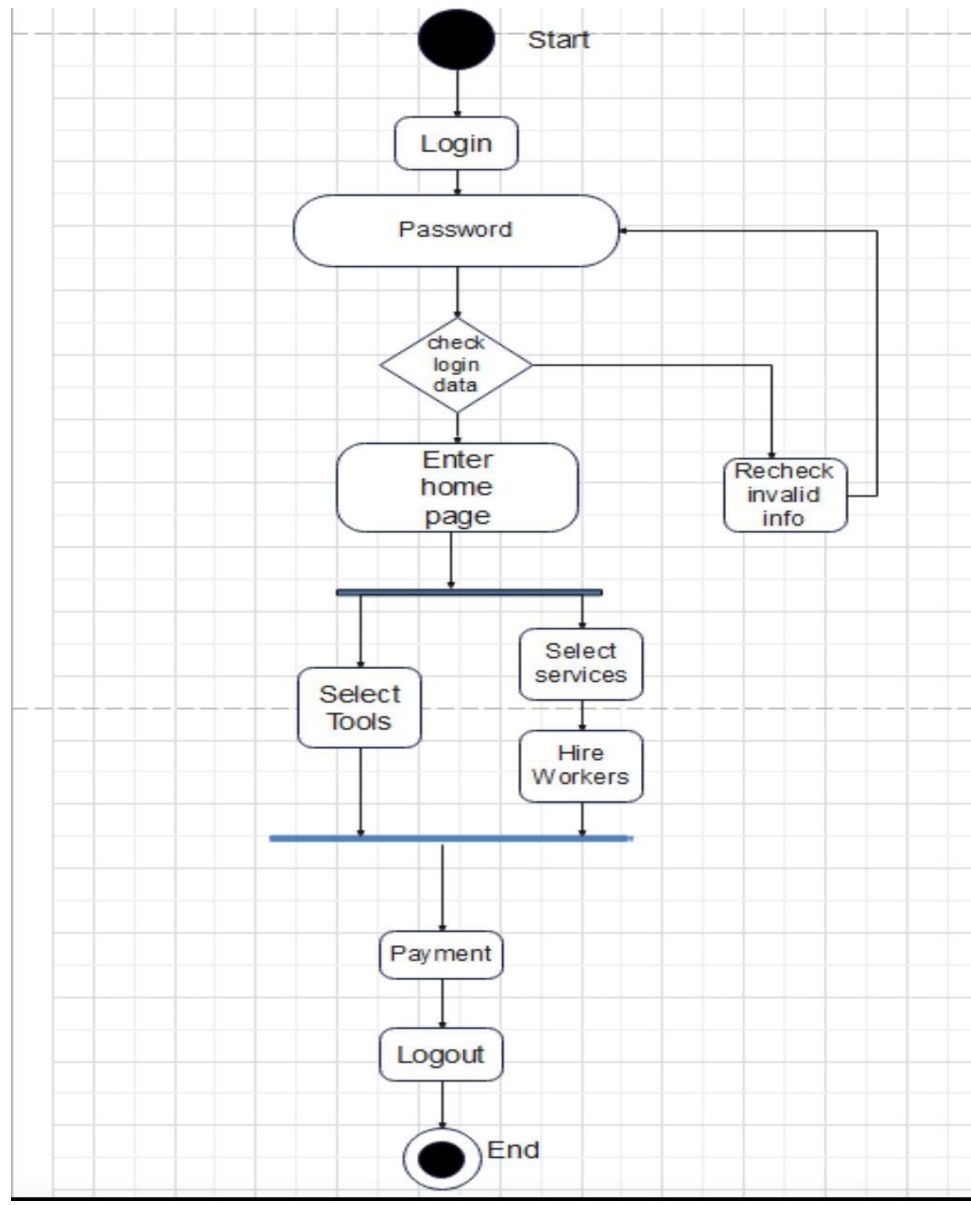
3.ACTIVITY DIAGRAM

Activity diagrams are a type of UML (Unified Modeling Language) diagram used to model the dynamic aspects of a system or process. They provide a visual representation of the flow of activities, actions, and decisions within a system, making them a valuable tool for understanding and documenting complex processes. Here are some key points about activity diagrams:



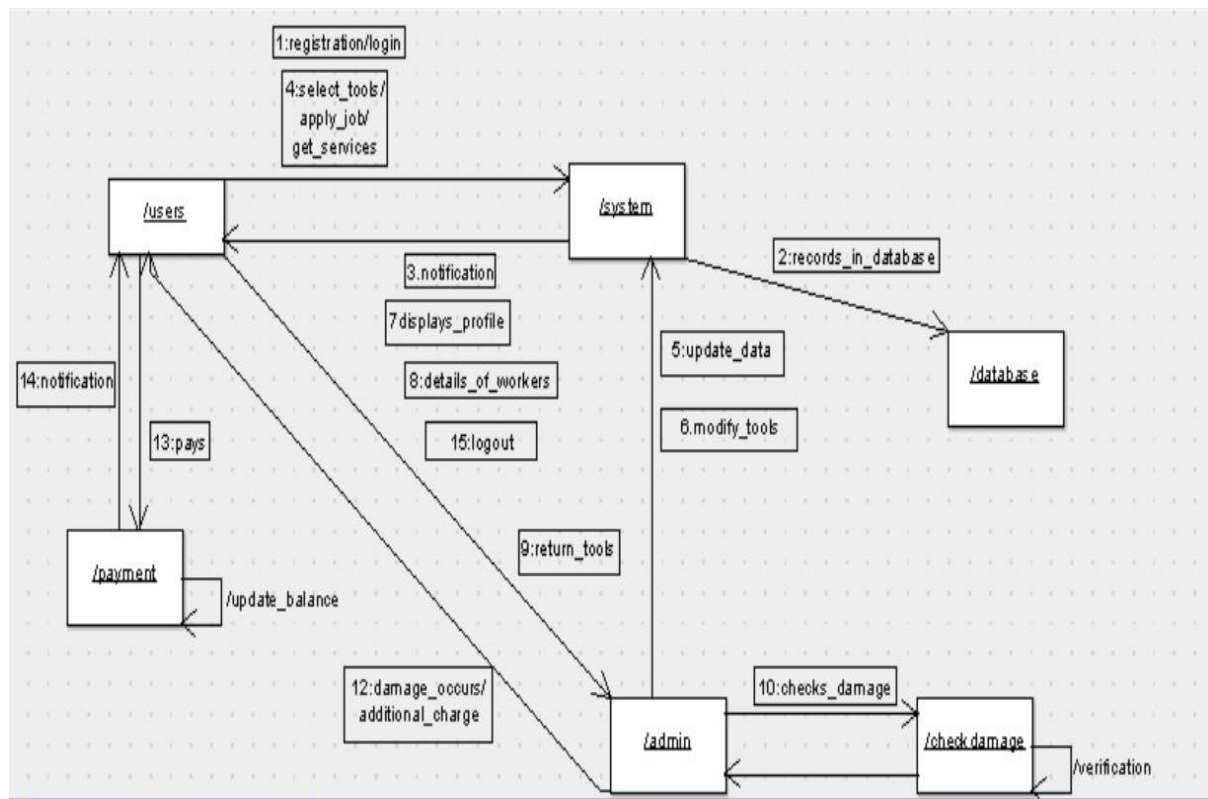
4.STATE CHART DIAGRAM

A state chart diagram is a type of diagram used in computer science and related fields the behavior of systems. State diagrams require that the system described is composed of a finite number of states. States including in following systems are Admin login details, to check login details is valid or not, and to login to the system successfully and to access the internal data successfully.



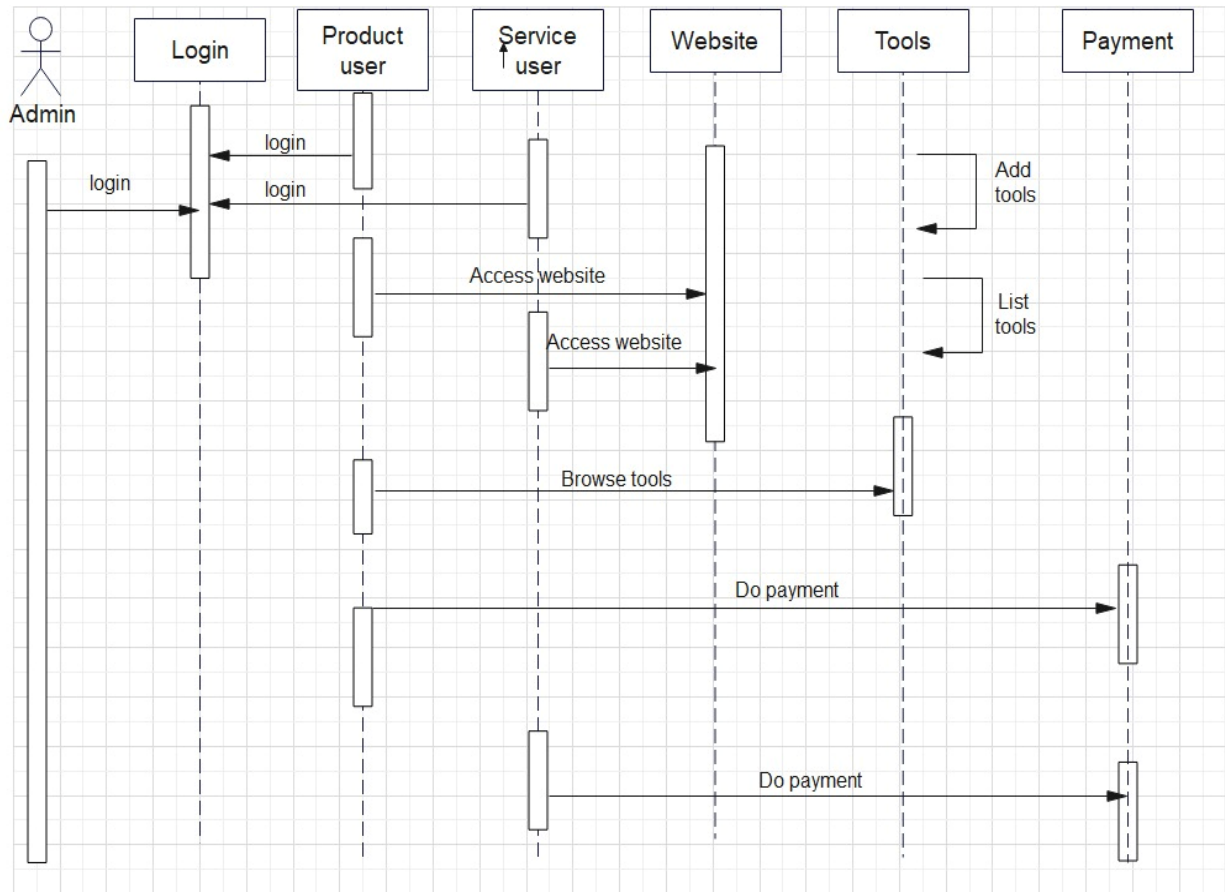
5.COLLABORATION DIAGRAM

Collaboration diagrams, also known as communication diagrams, are a type of UML(Unified Modeling Language) diagram that focuses on illustrating the interactions and collaborations between objects within a system or a particular scenario. These diagrams provide a visual representation of how objects within a system communicate and exchange messages



6.SEQUENCE DIAGRAM

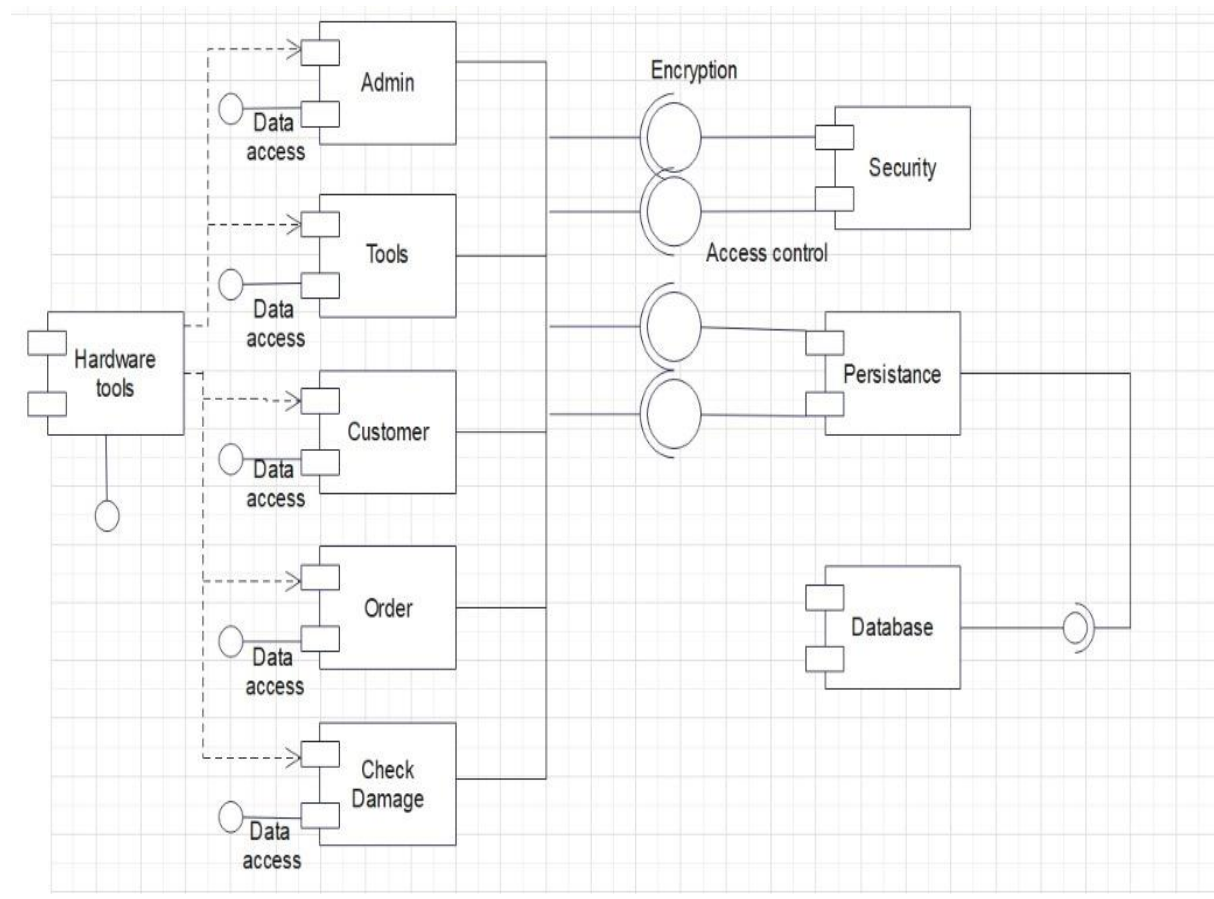
- The sequence diagram represents the flow of messages in the system and is also termed as an event diagram. It helps in envisioning several dynamic scenarios. It portrays the communication between any two lifelines as a time-ordered sequence of events, such that these lifelines took part at the run time.
- In UML, the lifeline is represented by a vertical bar, whereas the message flow is represented by a vertical dotted line that extends across the bottom of the page. It incorporates the iterations as well as branching.



7.COMPONENT DIAGRAM

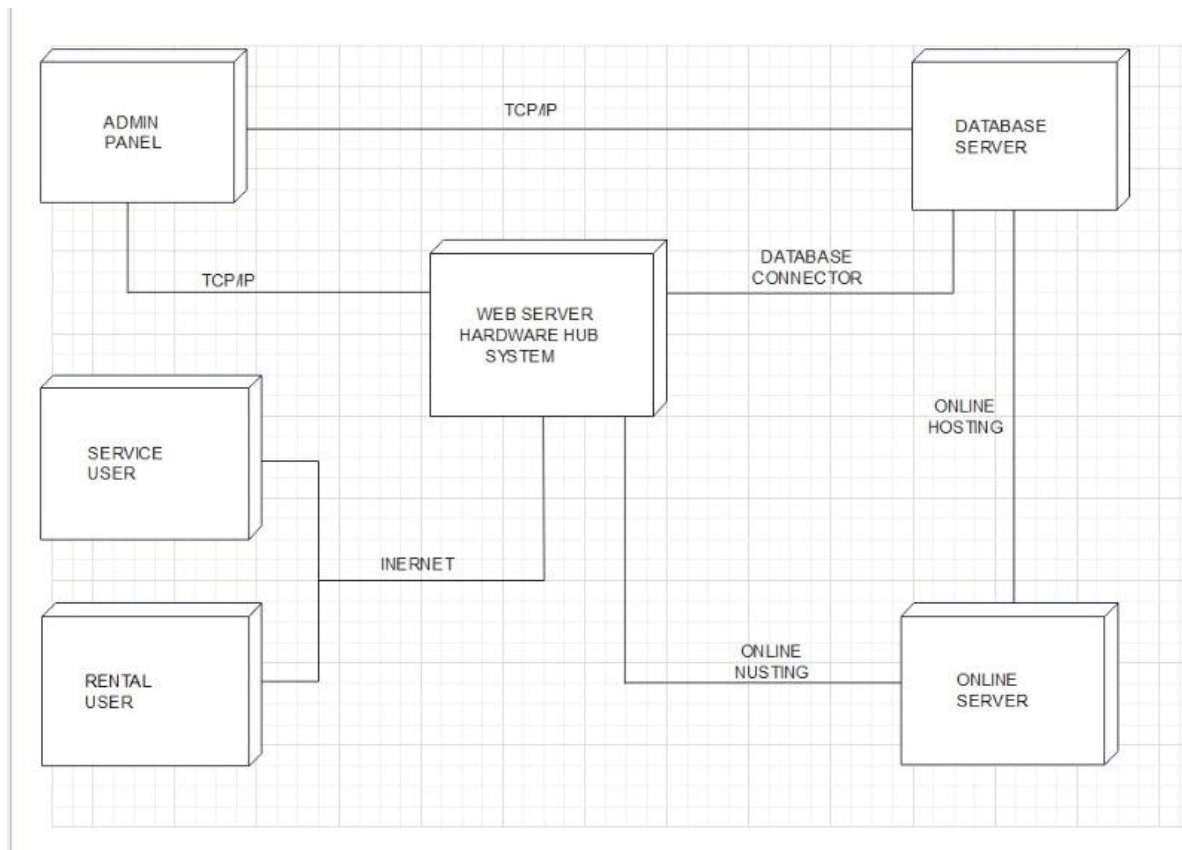
A component diagram is a type of UML (Unified Modeling Language) diagram that provides a visual representation of a system's architecture and the organization of its components and their relationships. These diagrams are

often used in software engineering to illustrate the high-level structure of a system, showing how various components interact and communicate.



8.DEPLOYMENT DIAGRAM

Deployment diagrams are used for describing the hardware components, where software components are deployed. Component diagrams and deployment diagrams are closely related. Component diagrams are used to describe the components and deployment diagrams show how they are deployed in hardware. In the below diagram, the donors require only the blood bank system. For this blood bank system, there is a use for application server and database server. Application server has the application part and the database server consists of all the databases related to the project. To store the data, we require a hardware part like data base, which has to be connected.



APPLICATION CODE

FRONTEND:-

```
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>navigation bars</title>
  <link rel="stylesheet" href="st.css"/>

</head>
<body>
  <header>
    
    <h1>HARDWARE HUB</h1>
  </header>
  <div class="mani">
    <!-- <marquee behavior="scroll" direction="left" scrollamount="10"> -->
    <ul>
      <li><a href="index.html">Home</a></li>
      <li><a href="new.html">About us</a></li>
      <li><a href="#">Services</a>
      <ul>
        <li><a href="rental.html">Rental</a></li>
        <li><a href="job.html">Job</a></li>
        <li><a href="service.html">Service</a></li>
      </ul>
    </li>
    <li><a href="./contact.html">Contacts</a>
      <ul>
        <li><a href="#">Divya:9704732343</a></li>
        <li><a href="#">Pavan:8106501264</a></li>
        <li><a href="#">Bodo:9959150947</a></li>
      </ul>
    </li>
    <li><a href="#">Admin</a></li>
    <li class="log"><a href="login.html">Login</a></li>
  </ul>
  <!-- </marquee> -->
</div>
<article>
  <a href="job.html"><button>Job<br>Pursuing</button></a>
  <a href="service.html"><button>Service<br>Required</button></a>
  <a href="rental.html"><button>Rental<br>Tools</button></a>
</article>
<footer>
<div class="grid">
  <div class="first">
    <h1><i>USEFUL LINKS</i></h1>
    <ul>
      <li>Privacy Policy</li>
      <li>Terms and Conditions</li>
      <li>Disclaimer</li>
      <li>Support</li>
    </ul>
  </div>
</div>
```

```

        <li>FAQ</li>
    </ul>
</div>
<div class="second">
    <div class="sec">
        
        <h1><i>Hardware Hub</i></h1>
    </div>
    !<p>Lorem ipsum dolor sit, amet consectetur adipisicing elit. Debitis minus non harum voluptatem
consequatur ex voluptatum molestiae veniam numquam culpa!</p>
    <div class="image">
        
        
        
    </div>
</div>
<div class="third"><h1><i>Quick Links</i></h1>
    <ul>
        <li>About Us</li>
        <li>Rent</li>
        <li>Product Detail</li>
        <li>FAQ</li>
        <li>Contact</li>
    </ul>
</div>

</div>
</footer>
</body>
</html>

```

CSS CODE:-

```

*
margin:0;
padding:0;
}
header{
    height: 12vh;
    width:100%;
    display:flex;
    justify-content: center;
    background-color: rgba(0, 0, 0, 0.274);
    color:white;
    align-items:center;
    position:fixed;
}
header img{
    width:5rem;
    height:4.5rem;
    /* mix-blend-mode: multiply; */
    margin-right:1.5rem;
}

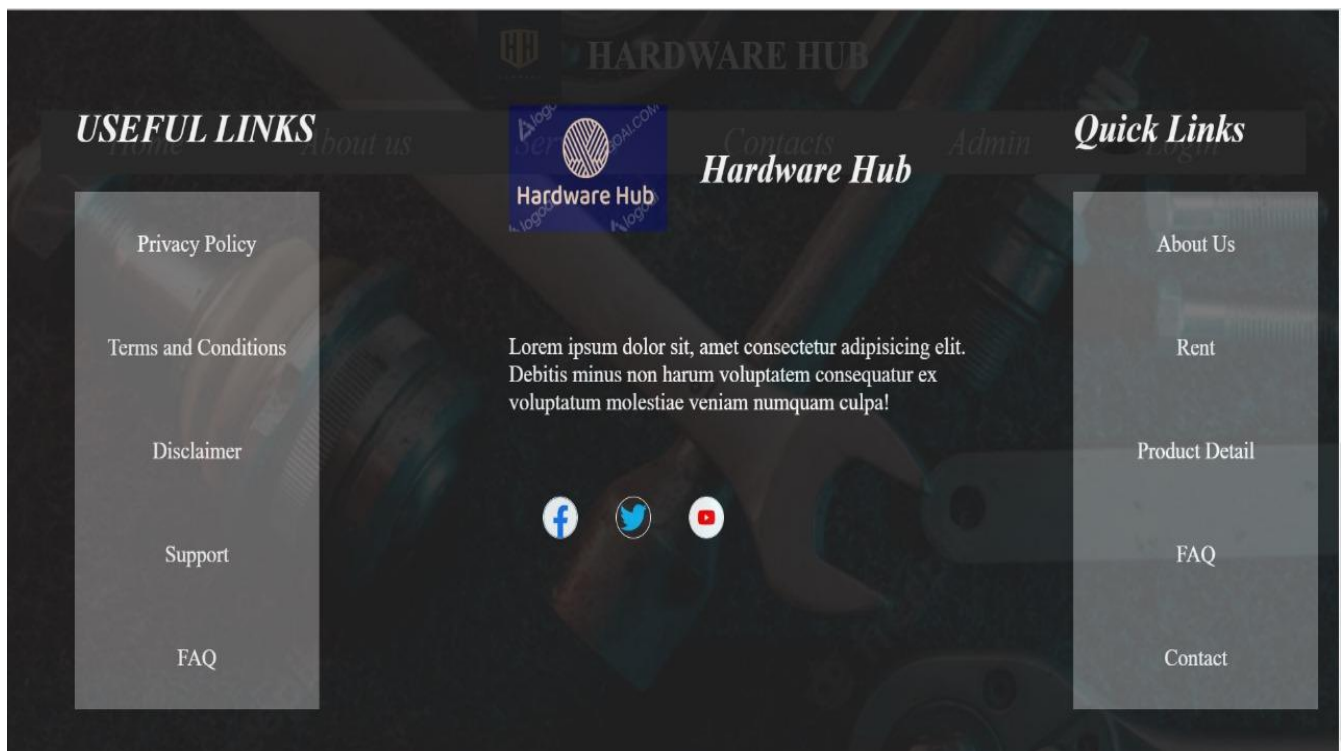
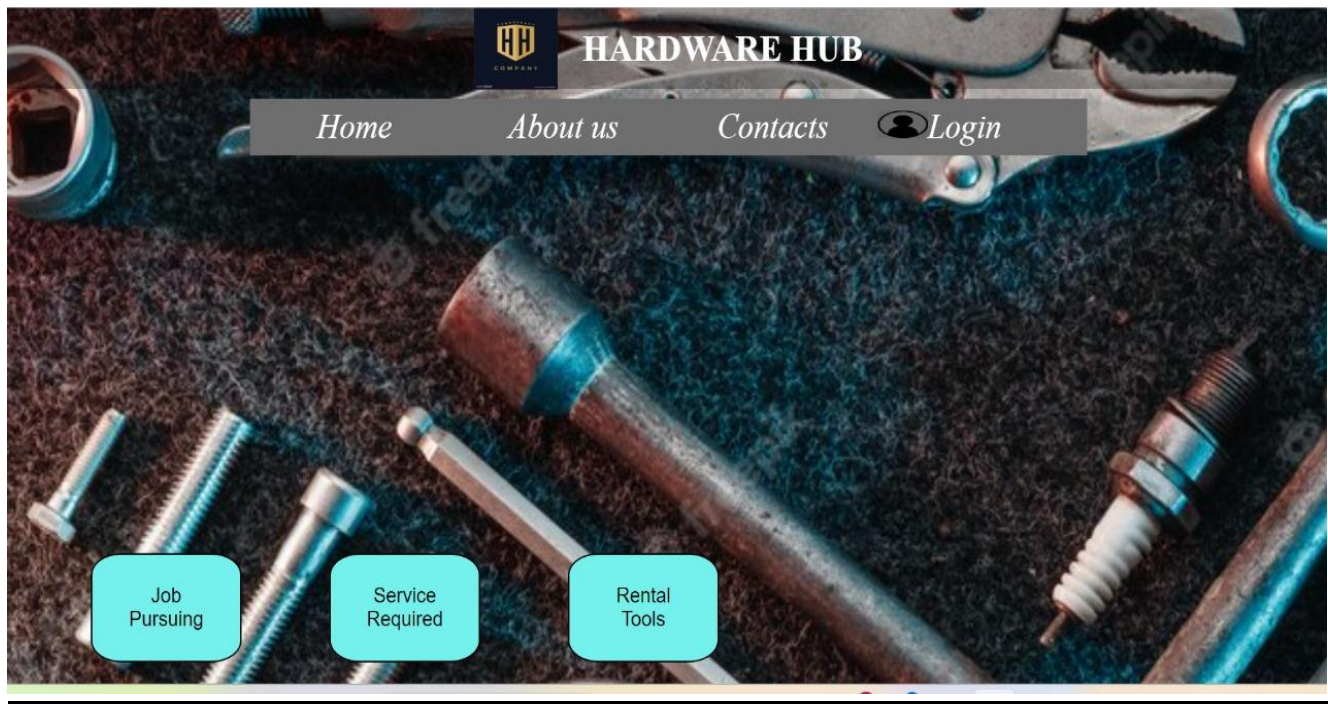
```




```
.mani{
  width:100%;
  height: 10vh;
  margin-top:5rem;
  display: flex;
  justify-content: space-around;
  position: fixed;
}
.mani marquee{
  height: 35vh;
}
ul{
  list-style-type: none;
}
ul li{
  float:left;
  width:200px;
  height:50px;
  text-align:center;
  font-size:30px;
  line-height:50px;
  background-color: #6e6e6e;
}
.mani ul li a{
  text-decoration: none;
  display:block;
  color:white;
  font-style: italic;
}
.mani ul li a:hover{
  background-color:#bcfd4c;
  color:black;
  display:block;
}
.mani ul li ul li{
  display:none;
  font-size: large;
}
.mani ul li:hover ul li{
  display:block;
  border:1px solid black;
  position:relative;
}
.mani img{
  width:3rem;
  height:1.5rem;
  mix-blend-mode: multiply;
}
.log{
  text-align:justify;
}
body{
  background-image: url("bg.jpg");
```


```
background-repeat: no-repeat;
background-size: cover;
}
article button{
margin-top:30rem;
margin-left:5rem;
border:1.5px solid black;
border-radius:20%;
width:9rem;
height:6rem;
font-size:large;
color:black;
background-color: #74f0Ed;
margin-bottom: 15rem;
}
article button:hover{
box-shadow: 4px 4px 4px #a6f340d8;
}
.grid{
display:grid;
grid-template-columns: 25% 50% 25%;
/* background-color: lightblue; */
/* padding:7rem; */
height: 600px;
background-color:#212121;
opacity: 0.9;
}
.first{
padding-top:5rem;
padding-left:4rem;
}
.first h1{
color:white;
}
.first ul{
list-style: none;
margin-top: 2rem;
}
.first ul li{
padding:1rem;
font-size: larger;
color:white;
}
.first ul li:hover{
color:red;
}
.second{
padding-top:5rem;
padding-left:10rem;
}
.sec{
display: flex;
flex-direction: row;
```

```
}
/* .sec img{
  mix-blend-mode: multiply;
}*/
.sec h1{
  padding-left: 2rem;
  padding-top: 2rem;
  color: white;
}
.second p{
  margin-top: 5rem;
  font-size: larger;
  color: white;
}
.image{
  margin-top: 4rem;
}
.image img{
  width: 2rem;
  height: 2rem;
  border-radius: 50%;
  border: 1px solid white;
  margin-left: 2rem;
}
.image img:hover{
  box-shadow: 3px 3px 3px 3px red;
}
.third{
  padding-top: 5rem;
  padding-left: 4rem;
}
.third h1{
  color: white;
}
.third ul{
  list-style: none;
  margin-top: 2rem;
}
.third ul li{
  padding: 1rem;
  font-size: larger;
  color: white;
}
.third ul li:hover{
  color: red;
}
```

RESULT







		
Drilling Machine	Cranes	Cutting Machine
rating: *****	rating: *****	rating: *****
500/-	15000/-	2000/-
Cart	Cart	Cart


HARDWARE HUB

[Home](#)

New Tools

			
Laptop repair	vehicle repair	construction tools	Carpentry tools

HOME SERVICES



Services

Let's take the services

submit

Let's Chat

Lorem ipsum, dolor sit amet consectetur adipisicing elit. Explicabo, maxime vero dolorem nostrum qui libero!

Lorem ipsum dolor sit amet consectetur adipisicing elit. Explicabo, cupiditate.

CONTACT

Let's make something cool

submit

CONCLUSION

In conclusion, the project involves catering to two types of customers: service customers and rental customers. For service customers, the company offers a range of repair services for household appliances and electronic devices. On the other hand, rental customers have access to a variety of tools and equipment, with the option to purchase or rent, backed by a deposit system. The project also includes a comprehensive database of skilled workers available for hire, with details such as contact information, addresses, Aadhar details, customer reviews, and expertise. This database facilitates efficient matching of workers with rental customers based on their specific needs. Overall, the project aims to streamline and enhance customer experiences in both service and rental domains.