



Assignment Title: **Project Management**

Module Title: **ACCC5005 Project Management**

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List of Abbreviations

<u>Abbreviation</u>	<u>Full description</u>
CPM	Critical Path Method
ERD	Entity Relationship Diagram
HTML	Hypertext Markup Language
PHP	Hypertext Preprocessor
PMP	Project Management Plan
RAD	Rapid Application Development
URL	Uniform Resource Locator
WBS	Work Breakdown Structure
XAMPP	"cross"-platform, Apache, MySQL, PHP, and Perl

Introduction

Over the years, software solutions have increased significantly, and it is a mandatory step for any growing organization to have an integrated system responsible for optimizing activities and reducing costs and effort.

Japher Motors is a 20-year-old automobile service company providing repairs for German manufactured cars. As a relatively small business, their day-to-day operations are usually handled by a receptionist. Mr. Japher, the owner of the company, is trying to adapt his business to technological change and automation processes and plans to migrate to a web-based integrated system.

The report outlines a detailed Project Management Plan (PMP) for the implementation of the requirements of the Japher Motors company and includes the following components: Work Breakdown Structure, Time Estimations, Gantt Chart, Critical Path Method, Stakeholders and Communication Plan, Engagement Assessment and Risk Management Plans, Prototype and Software Quality Assurance.

Work Breakdown Structure

The Work Breakdown Structure (WBS) represents a decomposition of the required work to be executed to obtain the deliverables and defines the scope of the project [1]. The WBS is designed according to Rapid Application Development methodology (RAD). The RAD methodology has the advantage of minimizing the development time by collecting feedback regularly from Mr. Japher [2]. On the other hand, its drawbacks apply to the ability to establish a successful team collaboration, which will be addressed later in the Prototype section.

RAD methodology contains four phases [3]: requirements planning, user design, rapid construction, and cutover.

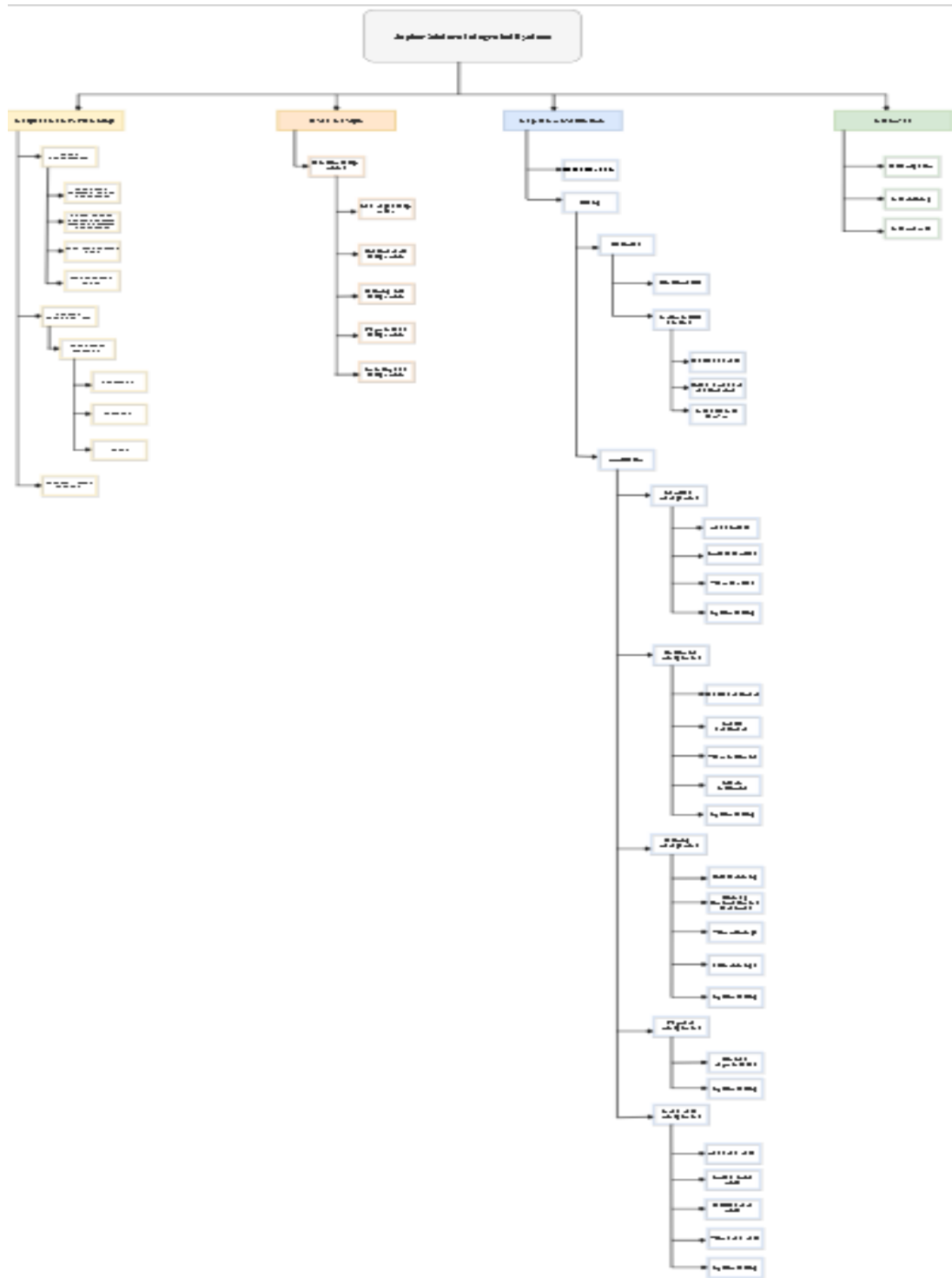


Figure 1: Work Breakdown Structure (WBS) diagram

A logically hierarchical organization of project work is shown in Figure 1 ([Appendix - WBS](#)). First phase defines the system modules and requirements:

- Customers module
 - As a system user, I should be able to: view customers, view customer's visits, create a new customer, edit customer's details, to search a customer
- Booking module
 - As a system user, I should be able to: view bookings, create a new booking, confirm a booking and print booking ticket, search a booking reference
- Payments module
 - As a system user, I should be able to: view bookings in order to generate payments, add spare parts to bookings, generate payment, send payment link via email, pay by card
- Services module
 - As a system user, I should be able to view services, add a new service, edit a service, search a service
- Inventory module
 - As a system user, I should be able to view spare parts, add a new spare part, edit a spare part, delete a spare part, search a spare part

In the design phase, mock designs were developed for each system requirement.

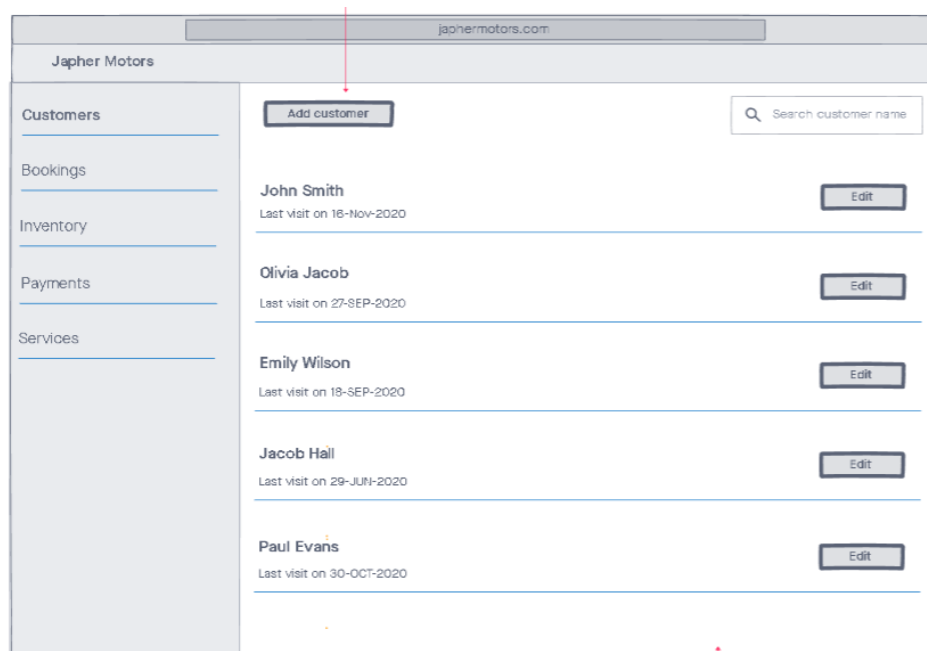


Figure 2: Customers main page - mock design

Rapid contraction is the third phase. At this stage, the team started the developing of a prototype. The last phase includes data migration, user manual and user training where a demo presentation of the prototype will be performed.

Gantt Chart

Gantt Chart is a tool developed by Henry L. Gantt in 1910–1915. It provides a mechanism for scheduling the tasks over the time [4]. The project total time was estimated to 9 weeks and the Gantt Chart was defined using a time calculation formula based on optimistic time, most probable time and pessimistic time.

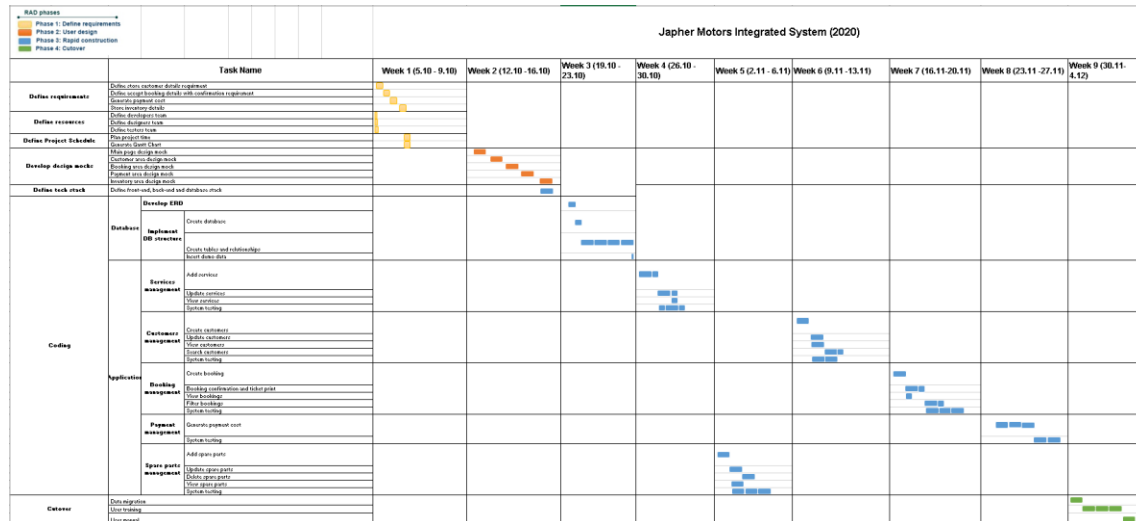


Figure 3: Gantt Chart

Time unit measure				
	1 day			
	1/2 day			
	1/4 day			
Estimate time formula:				
$Te = (To + 4Tm + Tp) / 6$				
	To(h)	Tm(h)	Tp(h)	Te(h)
Define requirements	6	6	12	7.00
Define resources	3	3	8	3.83
Define project schedule	6	6	16	7.67
Develop design mocks	25	2	40	12.17
Define tech stack	4	6	8	6.00
Develop ERD	4	5	7	5.17
Implement DB structure	30	32	40	33.00
Services management	45	46	60	48.17
Customers management	50	51	68	53.67
Booking management	42	45	60	47.00
Payment management	35	40	50	40.83
Spare parts management	48	50	60	51.33
Cutover	30	35	48	36.33
Total				352.17

Figure 4: Time unit measure and estimation formula

Figure 3 ([Appendix – Gantt Chart](#)) illustrates how each phase and work associated is split per weeks and Figure 4 illustrates the obtained time per task and the total time. Time estimation

formula method was chosen because it provides more flexibility if there is a large amount of time between the optimistic and pessimistic time [5]. For example, for customers management feature the best-case scenario is 50h, the most likely time is 51h and in the worst-case scenario is 68h. This results in an estimated duration of approximately 54h.

Critical Path Method

Critical Path Method (CPM) is another essential component of the PMP used for defining the deadlines and analyze the longest distance between the start of the project and the end of it. It includes the durations of all tasks with a highlight of the longest one [6].

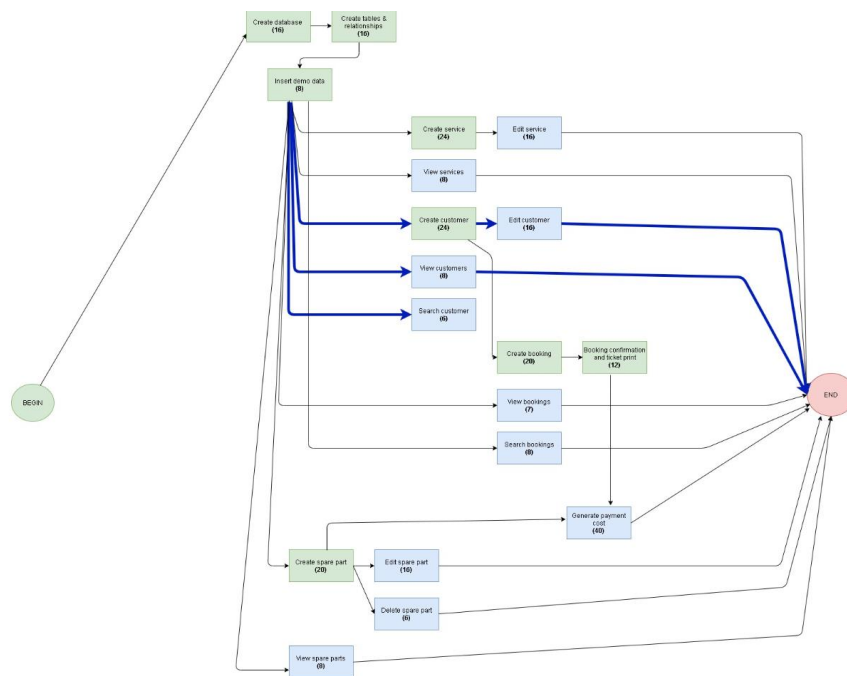


Figure 5: Critical Path Method (CPM)

Figure 5 ([Appendix – CPM](#)) illustrates the Critical Path diagram and highlights with a bolded arrow the customer's flow as it represents the longest distance between start and end point of the project having an estimation time of 54h.

Stakeholders and Communication Plans

A solid identification of the project stakeholders is also needed in an effective project management plan, in addition to business requirements, technical analysis, time and cost estimates.

Stakeholders are a group of individuals who are directly or indirectly affected by changes in the project including managers, team members, customers or competition and government regulators [7]. Not all stakeholders have the same interest in the project, or the same power and Mendelow's Matrix [8] illustrates how they can be satisfied:

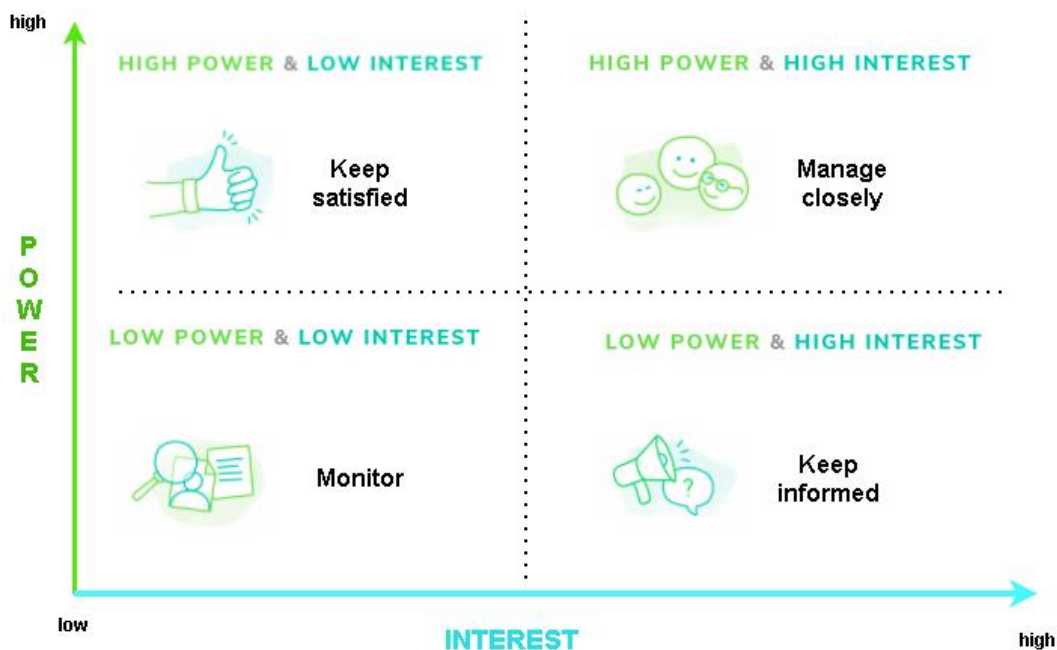


Figure 6: Mendelow's Matrix for stakeholders' management plan

For Japher Motors' project management plan the following stakeholders' register was created:

Stakeholder name	Role	Power (H/L)	Interest (H/L)
Mr. Japher	Customer	H	H
Modak Koushik	Project Manager	H	H
Sandra Anghel	Developer	L	H

Bianca Antoci	Technical Lead	H	H
Claudiu Stelian	Developer	L	H
Octavian Libotean	Developer	L	H
Kamen Todorov	Developer	L	H
Terry Walcott	Supervisor	L	L

Table 1: Stakeholders register

A communication strategy is necessary to ensure that the stakeholders can interact once they and their interest and power are identified. The communication is possible using different channels. The maximum recommended number of possible used channels may be calculated using the following formula [9]:

$Tc = n*(n - 1) / 2$, where Tc = total number of communication channels, n = total number of stakeholders

For the current project, the number of possible used channel is $8*(8-1)/2 = 28$, but different stakeholders may use same channels. For example, an effective communication way between team members (developers) may be Slack, Skype or Microsoft Teams. During this project, Skype was considered the perfect choice, but Emails were also used. The communication with the project manager and Mr. Japher was closely managed using Emails and formal meetings on Microsoft Teams information reflected in the communication plan table:

Stakeholder name	Engagement action	Channel	Frequency
Mr. Japher	Manage closely	Emails	Daily
Modak Koushik	Manage closely	Emails and formal Microsoft Teams meetings	Weekly
Sandra Anghel	Keep informed	Skype, Emails	Weekly
Bianca Antoci	Manage closely	Skype, Emails	Weekly
Claudiu Stelian	Keep informed	Skype, Emails	Weekly
Octavian Libotean	Keep informed	Skype, Emails	Weekly
Kamen Todorov	Keep informed	Skype, Emails	Weekly
Terry Walcott	Monitor	Microsoft Teams meeting	Monthly

Table 2: Communication Plan

Engagement Assessment and Risk Management Plans

A successful project depends on the cumulative effort and support of all involved individuals. Some stakeholders may be actively involved and responsible based on their interest and influence, and others may become a danger to the project by attempting to sabotage it. The Engagement Assessment Matrix is a powerful mechanism to determine what is the effect knowledge and support provided by each stakeholder by assigning one of the following categories: unaware, resistant, neutral, supportive, and leading [10].

Stakeholder name	Unaware	Resistant	Neutral	Supportive	Leading
Mr. Japher					
Modak Koushik					
Sandra Anghel					
Bianca Antoci					
Claudiu Stelian					
Octavian Libotean					
Kamen Todorov					
Terry Walcott					

Table 3: Engagement Assessment Matrix

All team members are part of the leading category as they are aware of the impact and they are actively involved. On the other hand, Mr. Japher knows the effects of the project, but he still may resist to changes as he is the one that needs to approve a modification. The project manager is aware and supportive of the effect, and the supervisor is neutral, since he must be persuaded that the changes are beneficial.

The Engagement Assessment Matrix leads to a risk analysis to identify the potential threats and determine the action points required to guarantee the successful completion of the project:

Stakeholder name	Risk	Actions
Modak Koushik	Lack of communication with the customer or technical lead. Lack of internal procedures and resources licenses or approvals	Constantly provide and collect feedback from Mr. Japher and constantly communicate with the technical lead. Define internal procedures.
Sandra Anghel	Lack of technical knowledge. Lack of communication related to blocking situations or issues. Possible leave from the company.	Report issues/blocking situations to the technical lead. Gain technical knowledge. Inform the technical lead about the leaving desire.
Bianca Antoci	Lack of technical knowledge or leadership skills. Lack of communication related to blocking situations or issues. Possible leave from the company.	Ensure infrastructure is functional and needed software is available. Constantly inform the project manager. Always update the team about the changes. Provide technical support to the team. Inform the project manager about the leaving desire. Define a backup and recovery strategy.
Claudiu Stelian	Lack of technical knowledge. Lack of communication related to blocking situations or issues. Possible leave from the company.	Report issues/blocking situations to the technical lead. Gain technical knowledge. Inform the technical lead about the leaving desire.
Octavian Libotean	Lack of technical knowledge. Lack of communication related to blocking situations or issues. Possible leave from the company.	Report issues/blocking situations to the technical lead. Gain technical knowledge. Inform the technical lead about the leaving desire.
Kamen Todorov	Lack of technical knowledge. Lack of communication related to blocking situations or issues. Possible leave from the company.	Report issues/blocking situations to the technical lead. Gain technical knowledge. Inform the technical lead about the leaving desire.

Table 4: Risk Management Plan

Prototype

Japher Motors System is a web-based application designed and implemented to meet the business requirements set out in the Work Breakdown Structure. It represents a prototype that will be delivered during the Cutover phase. Technology stack was chosen based on a rigorous analysis of the team members' knowledge, technical specifications, and infrastructure and includes GitHub, SourceTree, Visual Studio Code, XAMPP server, PHP programming language, jQuery, HTML, Bootstrap, MySQL, and Chrome browser.

Japher Motors System prototype has a simple architecture that includes several components:

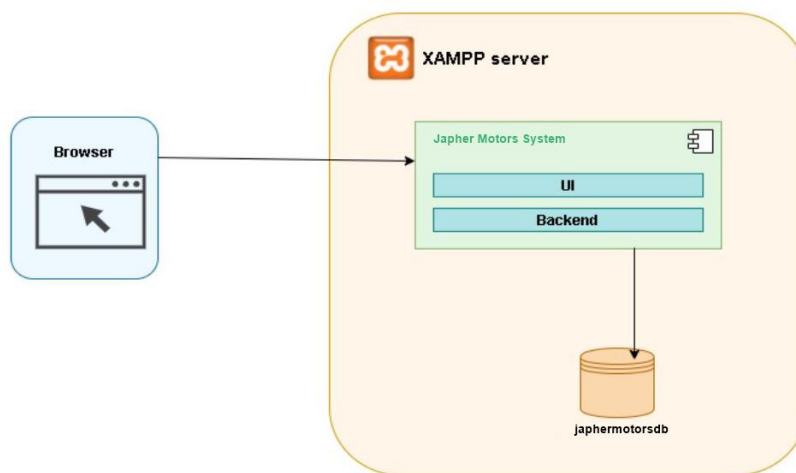


Figure 7: Japher Motors System prototype architecture

The application has a user-interface component responsible for the presentation layer and a backend component responsible for the business logic of the system and the communication with the database.

The data is stored into a MySQL database. The ERD (Entity Relationship Diagram) describes how data is stored into tables and relationships between them:

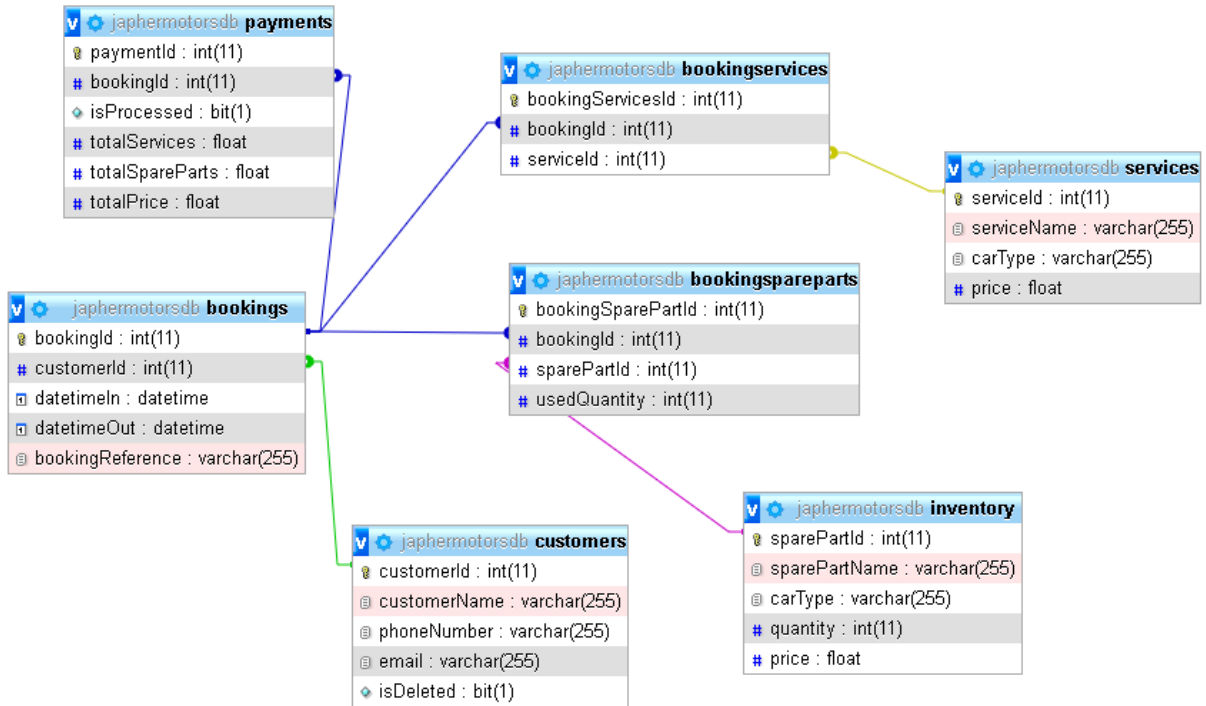


Figure 8: Japher Motors database – ERD

The modules run using XAMPP, which represents an abbreviation for Apache, MySQL, PHP and Perl and acts as a web server responsible for delivering the response when a client sends a request from the browser [11].

Each major requirement was assigned to the team member and the allocation planning is reflected in the GitHub project dashboard:

Team member	Assigned requirement
Sandra Anghel	Database implementation and Customers module
Bianca Antoci	Bookings module
Claudiu Stelian	Inventory module
Octavian Libotean	Payments module
Kamen Todorov	Services module

Table 5: Team members tasks allocation

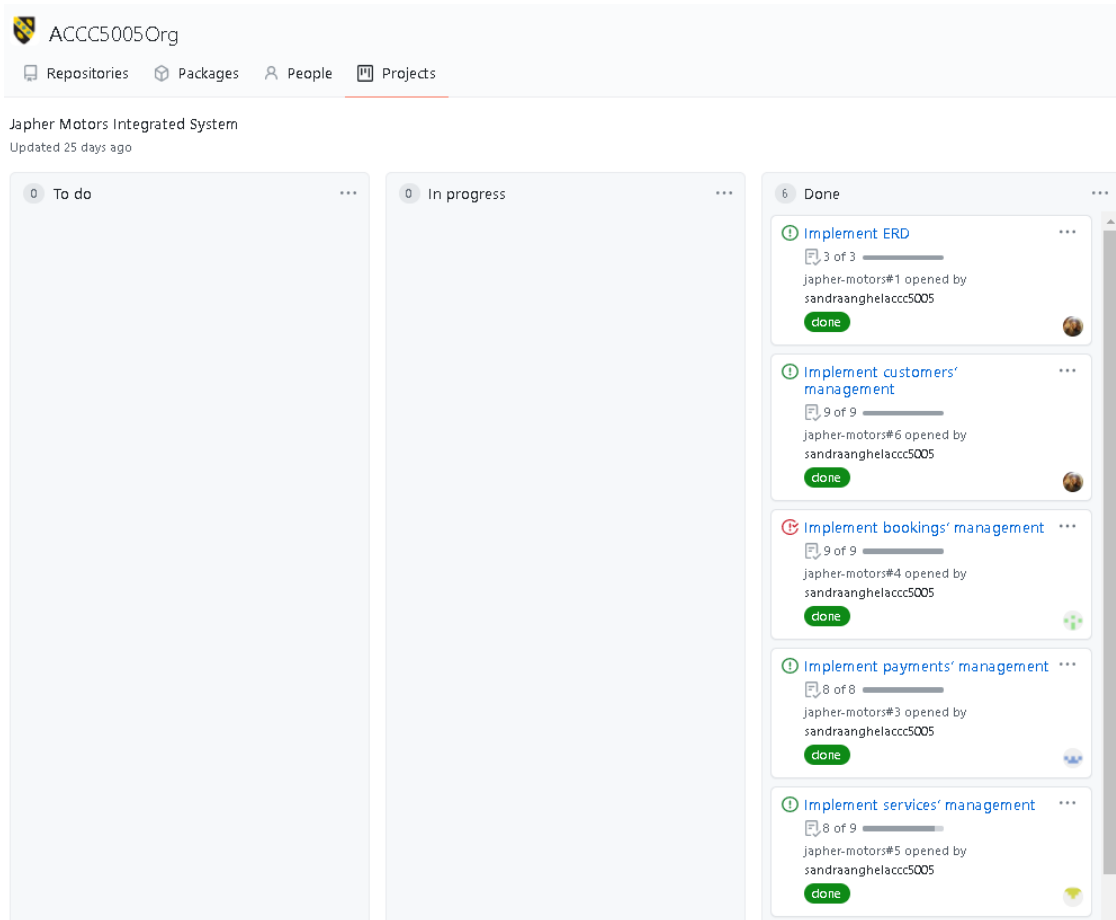


Figure 9: GitHub - Japher Motors project dashboard

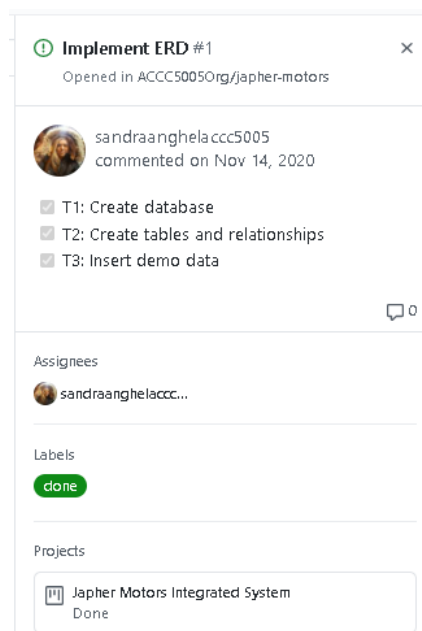


Figure 10: GitHub - task description

For the current project, this allocation method was acceptable, as the team was able to start the development process in parallel without having blocking situations. The work was balanced inside the team. Acceptance criteria have been properly discussed and defined in advanced. At the beginning, setting up infrastructure was difficult, but earlier in the development stage, due to a great team collaboration, problems were solved.

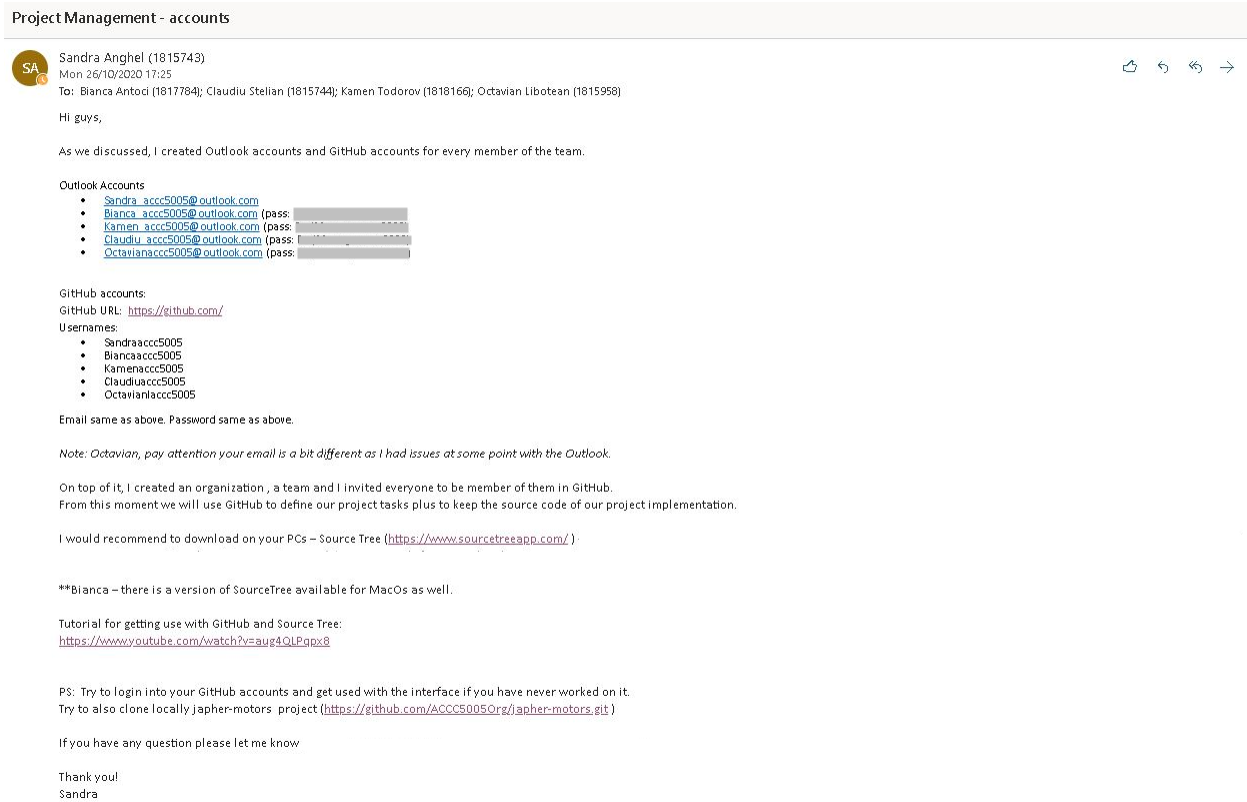


Figure 11: Team collaboration email example

Software Quality Assurance

Software Quality Assurance represents a set of activities that provides an evidence of the software product functionality [5]. A testing document that contains manual testing and test cases for each requirement has been developed to ensure Software Quality Assurance.

A list of assumptions is necessary to define the testing plan:

- No user authentication required
- JapherMotors application is running using port 80

- Application is configured into htdocs directory using root name: japher-motors-frontend.
 - Application is accessible in browser by URL: http://localhost/japher-motors-frontend

Test case

Id	Name
1	View customers

Acceptance Criteria

As a user, I should be able to view customers

Steps

No	Action	Expected result
1	Open a browser and access http://localhost/japher-motors-frontend and click Customers menu item	Customers main page is displayed, and a list of customers is available

Test output:

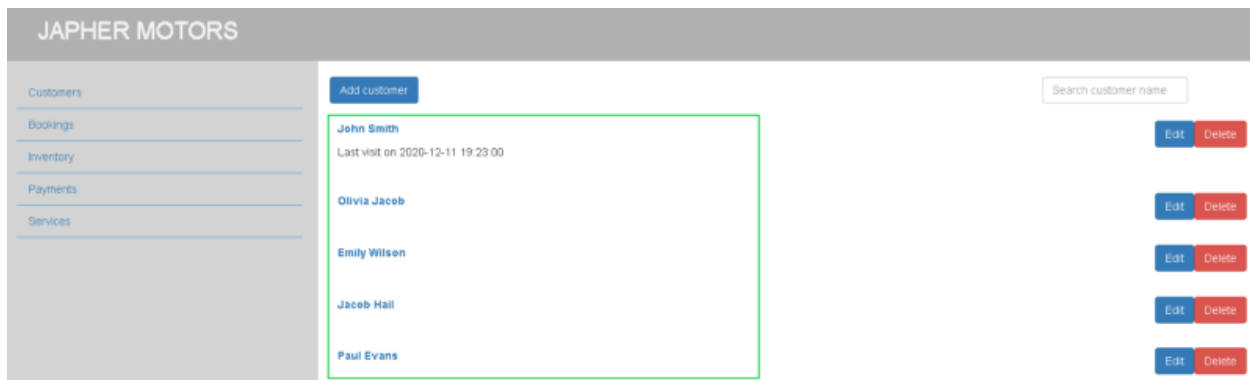


Figure 12: Test Case #1 output

Test case

Id	Name
2	View customer's visits

Acceptance Criteria

As a user, I should be able to view customer's visits

Steps

No	Action	Expected result
1	Open a browser and access http://localhost/japher-motors-frontend and click Customers menu item	Customers main page is displayed, and John Smith customer is visible
2	Click on John Smith link	Visits page is displayed, and a list of visits is available

Test output:

John Smith

Last visit on 2020-12-11 19:23:00

Edit

Delete

Back

Visits

Booking reference	Date/Time In	Date/Time Out
aa-bb-cc-dd-ee-123	2020-12-11 19:23:00	2020-12-11 19:23:01

Figure 13: Test Case #2 output

Test case

Id	Name
3	Create a new customer

Acceptance Criteria

As a user, I should be able to create a new customer

Steps

No	Action	Expected result
1	Open a browser and access http://localhost/japher-motors-frontend and click Customers menu item	Customers main page is displayed and Add customer button is visible
2	Click on Add customer button	Add new customer page is displayed
3	Click Create button	A validation message is displayed: Customer name is required! Invalid phone number. Please insert only digits. Phone number must have 10 digits! Missing or invalid email. Please insert a valid email!
4	Fill all fields: Customer name: Sandra Phone number: 0799456372 Email: sandra.anghel@gmail.com	The customer is saved in the database and displayed into the customers list

Test output:

Add customer

John Smith

Last visit on 2020-12-11 19:23:00

Edit

Delete

Add new customer

Customer name is required!
Invalid phone number. Please insert only digits. Phone number must have 10 digits!
Missing or invalid email. Please insert a valid email!

Customer name

Phone number

Email

Add new customer

Customer name

Phone number

Email

Add customer		Search customer name	
John Smith		Edit Delete	
Last visit on 2020-12-11 19:23:00			
Olivia Jacob		Edit Delete	
Emily Wilson		Edit Delete	
Jacob Hall		Edit Delete	
Paul Evans		Edit Delete	
Sandra		Edit Delete	

Figure 14: Test Case #3 output

Test case

Id	Name
4	Edit customer's details

Acceptance Criteria

As a user, I should be able to edit customer's details

Steps

No	Action	Expected result
1	Open a browser and access http://localhost/japher-motors-frontend and click Customers menu item	Customers main page is displayed
2	Click on Edit button for customer name: Sandra	A form with customer's details is displayed with all data field
3	Change the customer name to Sandra Anghel and click Save button	Changes are saved and customer is updated into the customers list

Test output:



Edit customer

Customer name

Phone number

Email

John Smith

Last visit on 2020-12-11 19:23:00

Olivia Jacob

Emily Wilson

Jacob Hall

Paul Evans

Sandra Anghel

Figure 15: Test Case #4 output

Test case	
Id	
Name	
5	Search a customer
Acceptance Criteria	
As a user, I should be able to search a customer	

<u>Steps</u>		
No	Action	Expected result
1	Open a browser and access http://localhost/japher-motors-frontend and click Customers menu item	Customers main page is displayed, and search bar is visible
2	Type 'Sandra' in the search bar and press Enter	Customers should be filtered. Only customer with name Sandra is displayed

Test output:

Add customer

Sandra Anghel

Edit

Delete

Figure 16: Test Case #5 output

Conclusion

Project Management Plan has a critical importance as it provides an overview of what and how can be achieved and provides support to establish proper standards. Via partners, teams, and administrators, successful project managers should be able to negotiate fair and realistic deadlines.

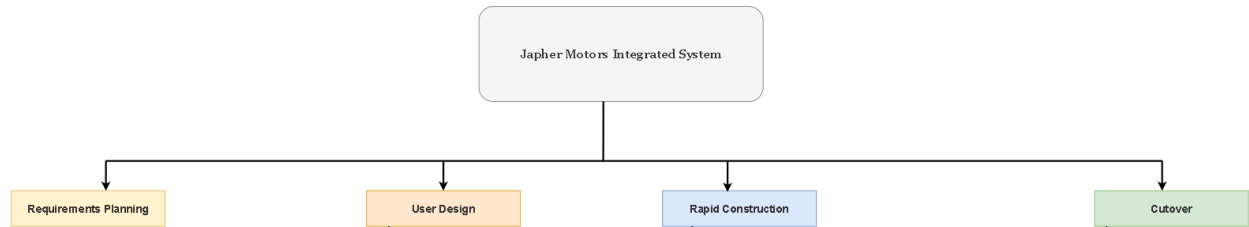
The report identified the critical components of Japher Motors company's project management plan providing a valuable summary of the project's commitment, time schedule, resources, stakeholders, risks, and deliverables.

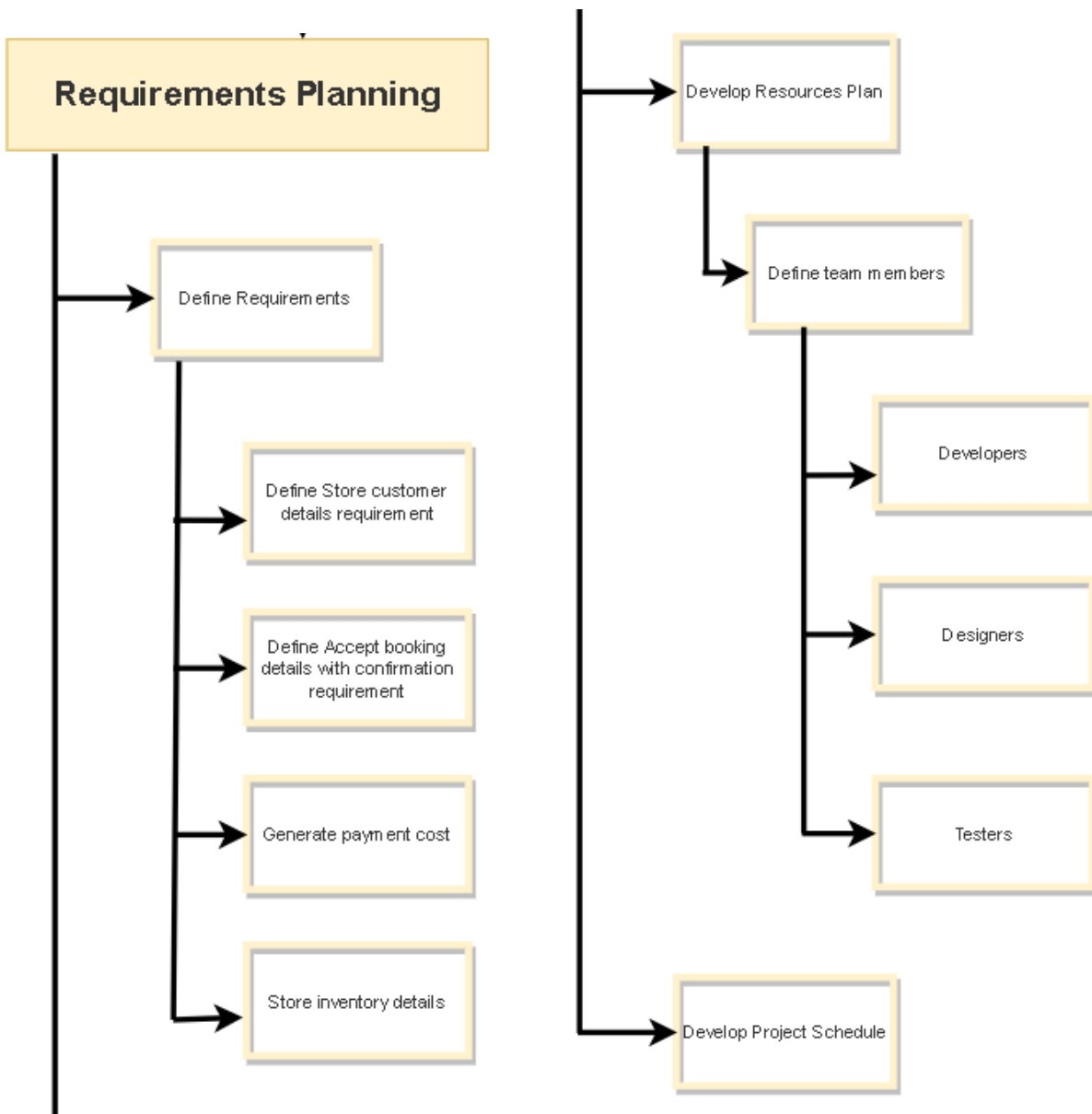
References

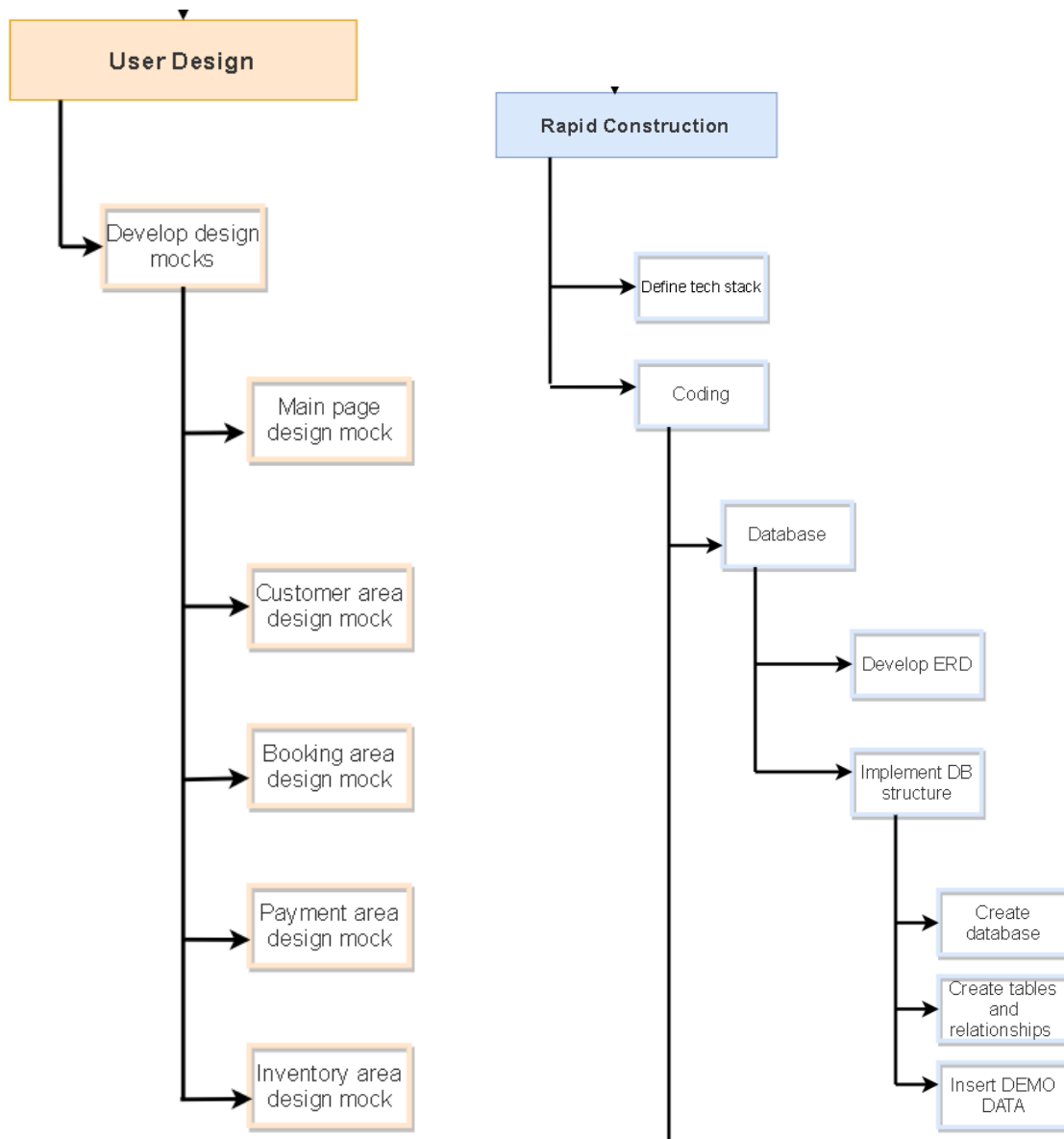
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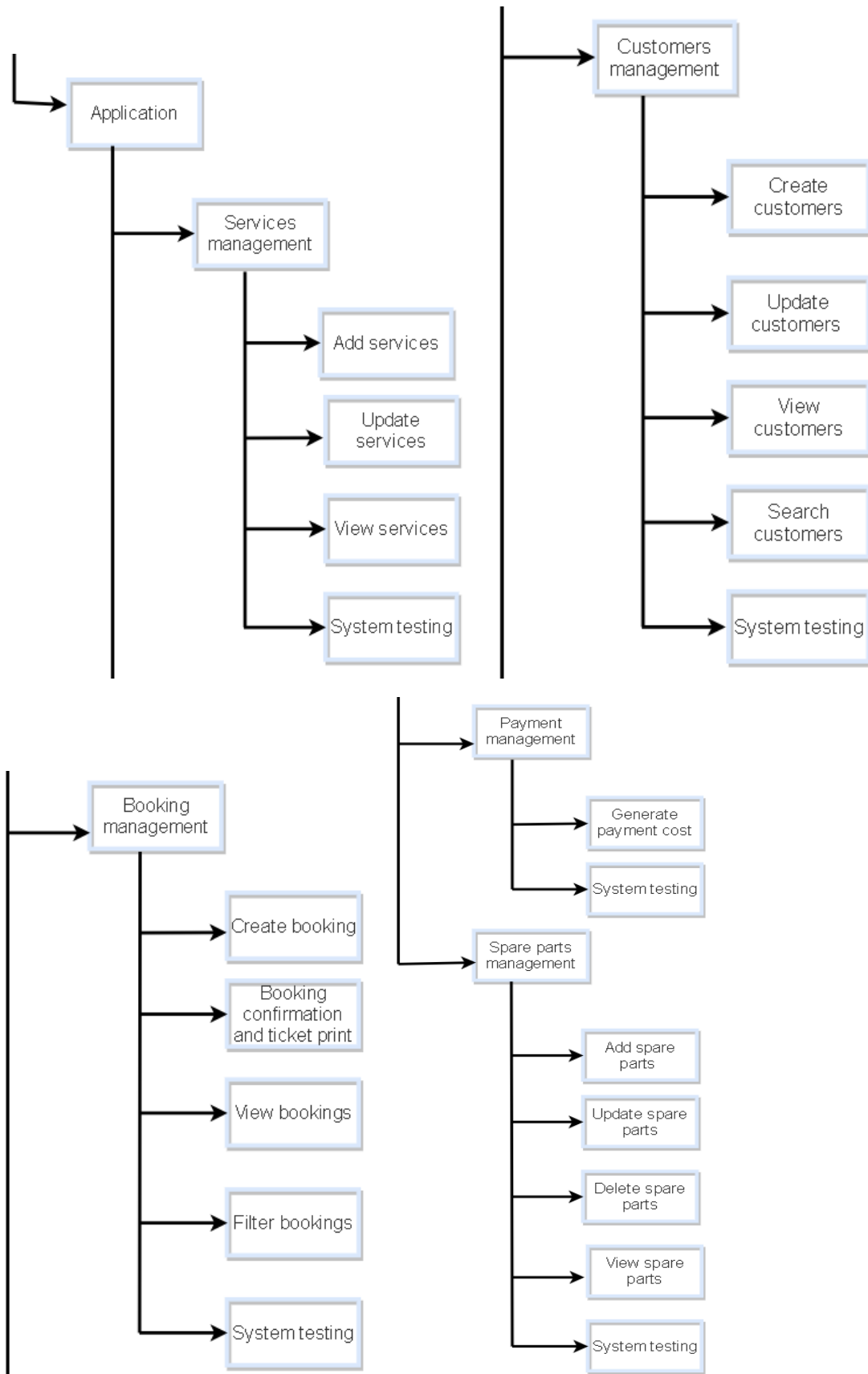
Appendix

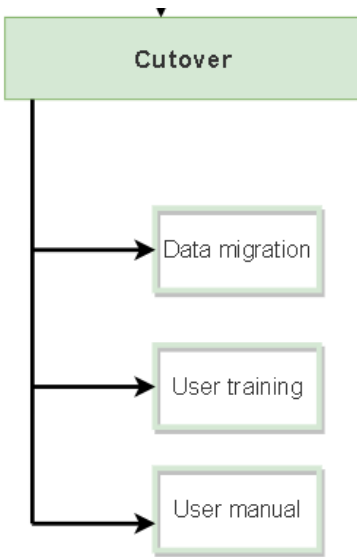
Work Breakdown Structure diagram



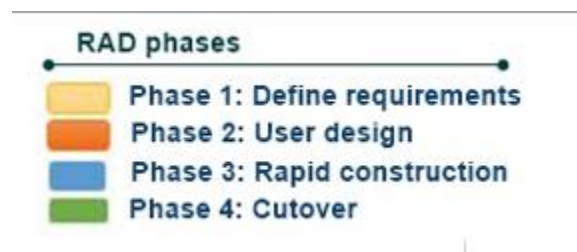








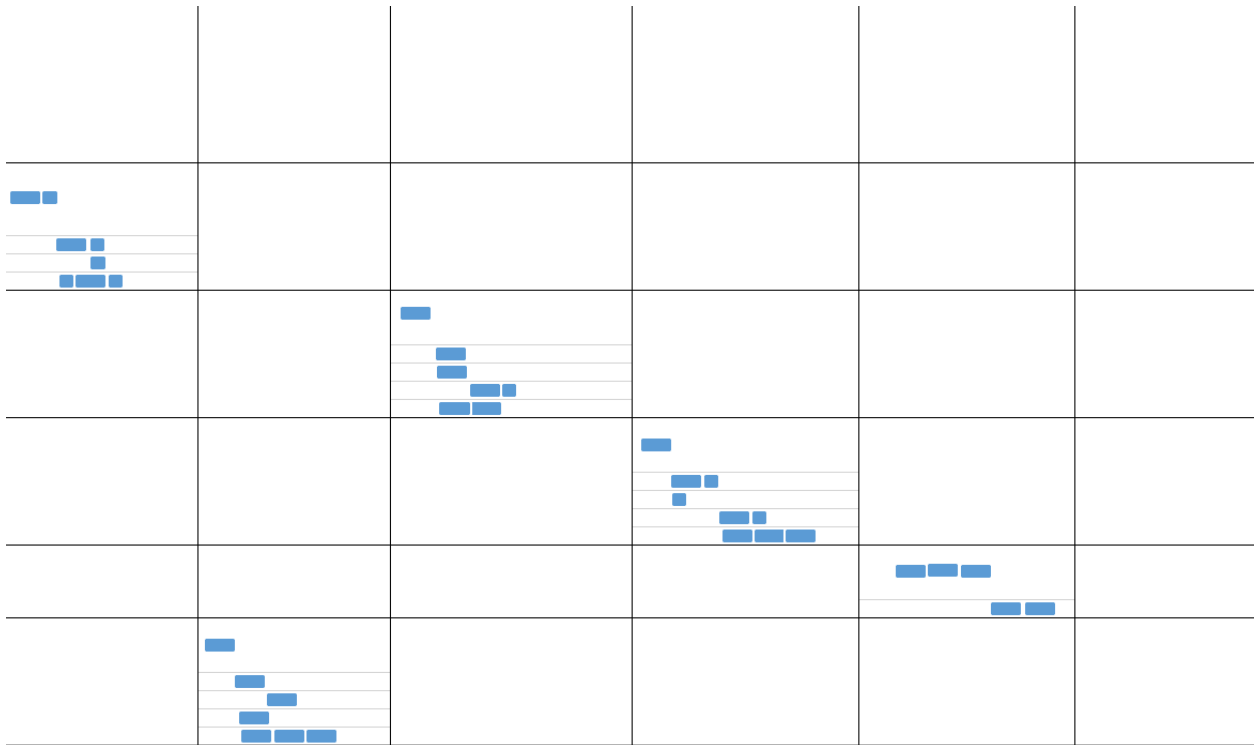
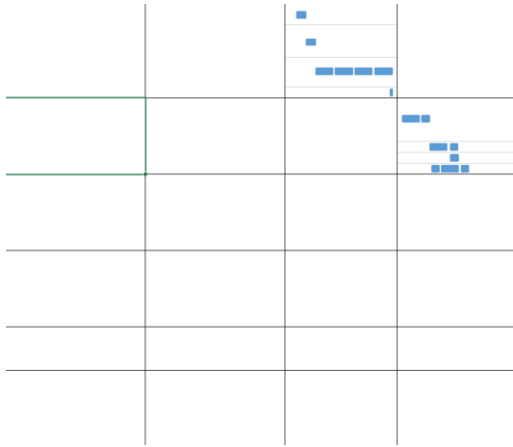
Gantt Chart



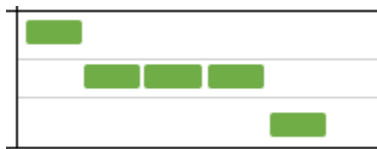
	Task Name
Define requirements	Define store customer details requirment
	Define accept booking details with confirmation requirement
	Generate payment cost
	Store inventory details
Define resources	Define developers team
	Define designers team
	Define testers team
Define Project Schedule	Plan project time
	Generate Gantt Chart
Develop design mocks	Main page design mock
	Customer area design mock
	Booking area design mock
	Payment area design mock
	Inventory area design mock
Define tech stack	Define front-end, back-end and database stack

Week 1 (5.10 - 9.10)		Week 2 (12.10 -16.10)		Week 3 (19.10 - 23.10)		Week 4 (26.10 - 30.10)		Week 5 (2.11 - 6.11)		Week 6 (9.11 -13.11)	

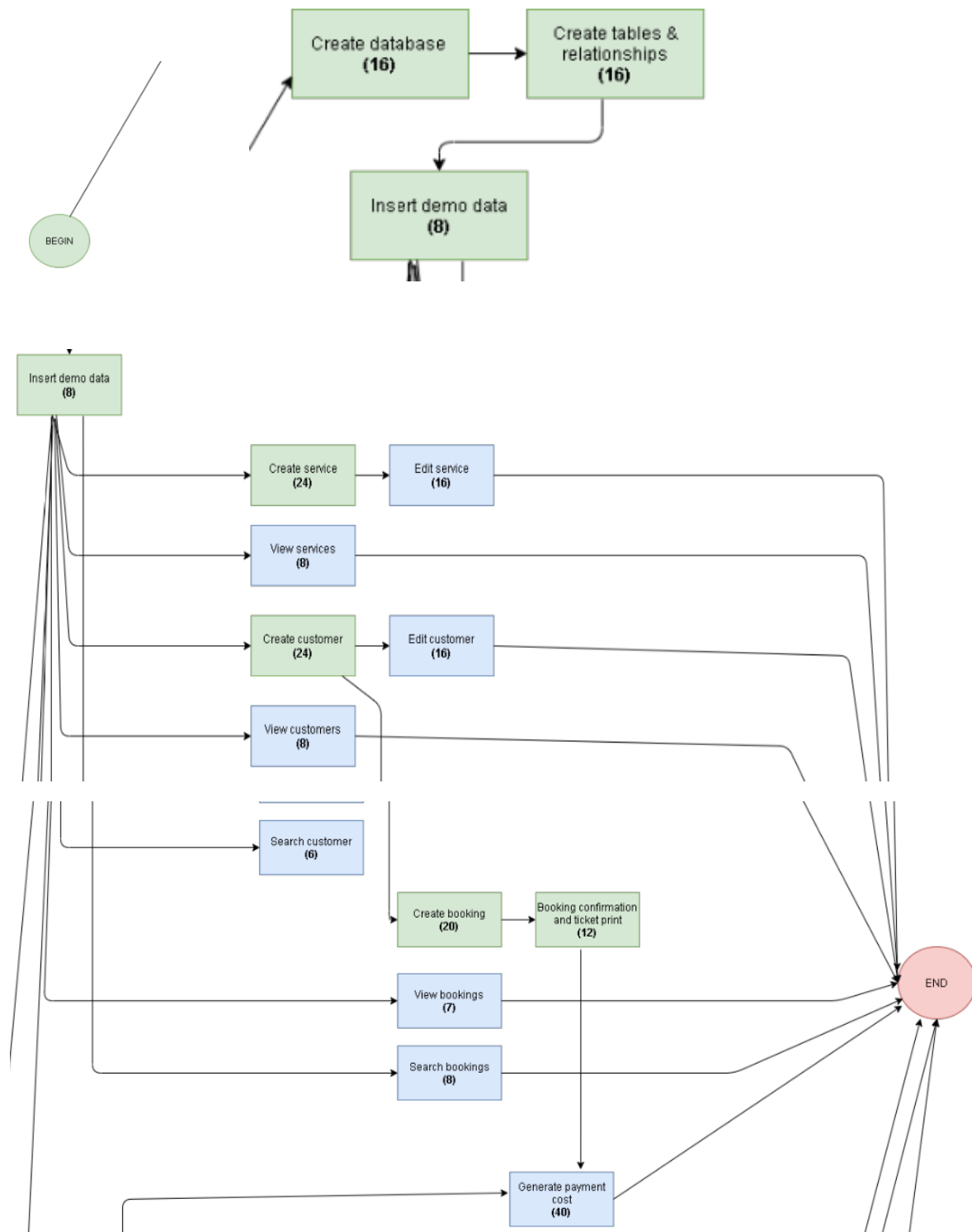
Coding	Database	Develop ERD	
		Implement DB structure	Create database
			Create tables and relationships
			Insert demo data
	Application	Services management	Add services
			Update services
			View services
			System testing
		Customers management	Create customers
			Update customers
			View customers
			Search customers
			System testing
		Booking management	Create booking
			Booking confirmation and ticket print
			View bookings
			Filter bookings
			System testing
		Payment management	Generate payment cost
			System testing
Spare parts management		Add spare parts	
		Update spare parts	
		Delete spare parts	
		View spare parts	
	System testing		

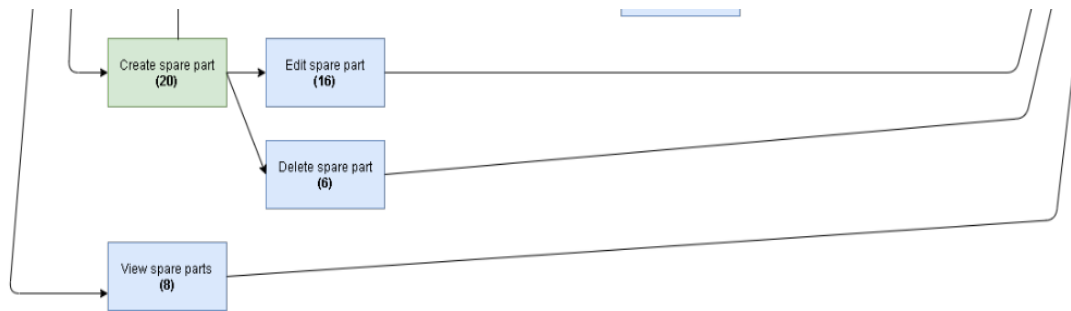


Cutover	Data migration
	User training
	User manual



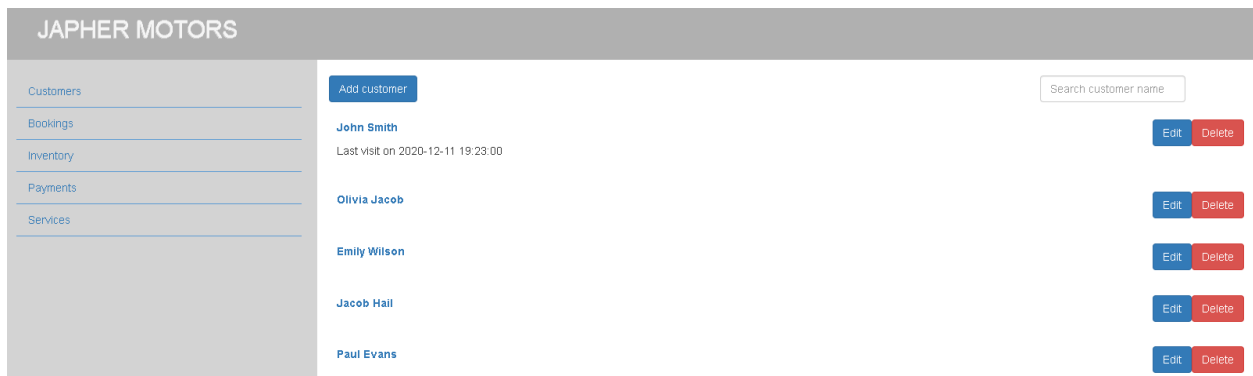
Critical Path diagram





Prototype

➤ Customers main page



➤ Create customer page

Add new customer

Customer name

Phone number

Email

➤ [Edit customer page](#)

Edit customer

Customer name

Phone number

Email

➤ View customer 's visits

Back

Visits

Booking reference	Date/Time In	Date/Time Out
aa-bb-cc-dd-ee-123	2020-12-11 19:23:00	2020-12-11 19:23:01

➤ Search customer

Add customer

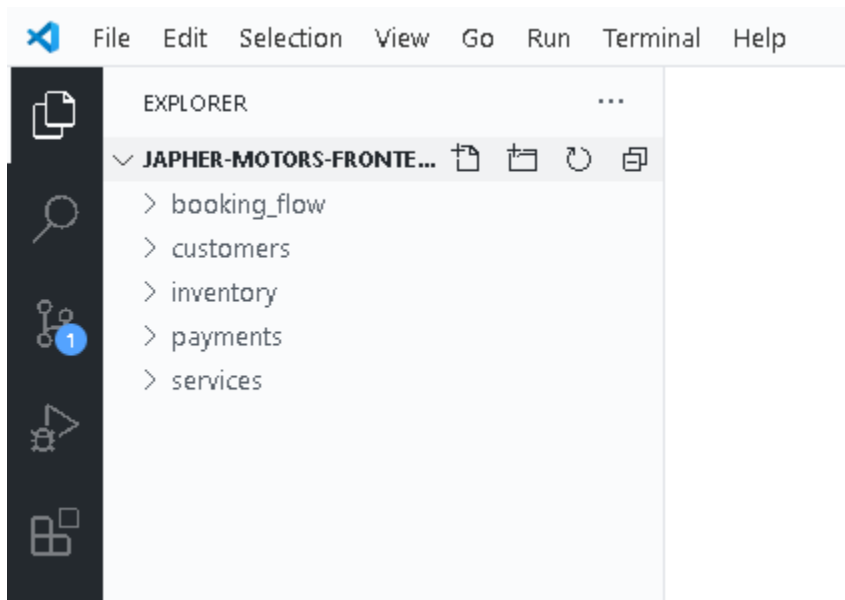
John Smith

Last visit on 2020-12-11 19:23:00

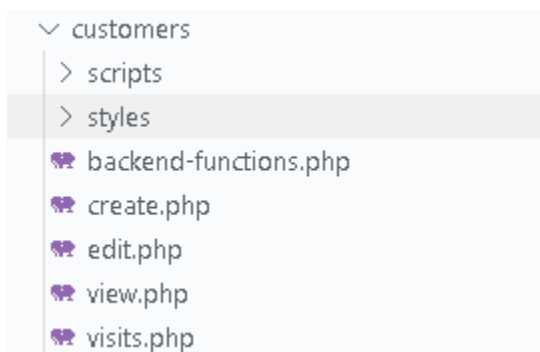
John

Edit Delete

➤ JapherMoters project structure



➤ Customers module project structure



➤ Backend-functions.php source code file

customers > backend-functions.php > getCustomers

```
1  <?php
2
3  session_start();
4
5  $servername = "localhost";
6  $username = "root";
7  $password = "";
8  $dbname = "japhermotorsdb";
9  $errors = array();
10
11 $conn = new mysqli($servername, $username, $password, $dbname);
12
13 if (isset($_SESSION['searchCustomerValue'])) {
14     $searchedCustomer = $_SESSION['searchCustomerValue'];
15 }
16
17 if (isset($_SESSION['searchCustomerValue']) || isset($_POST['searchCustomerInput'])) {
18     if (isset($_POST['searchCustomerInput'])) {
19         $searchedCustomer = $_POST['searchCustomerInput'];
20         $_SESSION['searchCustomerValue'] = $searchedCustomer;
21     }
22     $customers = searchCustomer($searchedCustomer);
23 } else {
24     $customers = getCustomers();
25 }
26
27 if (isset($_POST['createCustomer'])) {
28     $customerName = $_POST['customerName'];
29     $phoneNumber = $_POST['phoneNumber'];
30     $email = $_POST['email'];
31     createCustomer($customerName, $phoneNumber, $email);
32 }
33
34 if (isset($_GET['customerId'])) {
35     $customerId = $_GET['customerId'];
36     $customer = getCustomerById($customerId);
37     $visits = getVisitsByCustomerId($customerId);
38 }
39
40 if (isset($_GET['deletedCustomerId'])) {
41     $deletedCustomerId = $_GET['deletedCustomerId'];
42     deleteCustomer($deletedCustomerId);
43 }
44
```

```

function searchCustomer($searchedCustomer)
{
    global $conn;
    $customers = array();

    if ($conn->connect_error) {
        die("Connection failed: " . $conn->connect_error);
    }

    $searchedCustomer = $searchedCustomer;
    $query = "SELECT customerId, customerName FROM customers WHERE customerName like '%$searchedCustomer%' AND isDeleted = 0";
    $result = $conn->query($query);

    if ($result->num_rows > 0) {
        while ($row = $result->fetch_assoc()) {
            array_push($customers, $row);
        }
    }

    return $customers;
}

function createCustomer($customerName, $phoneNumber, $email)
{
    global $conn, $errors;

    if ($conn->connect_error) {
        die("Connection failed: " . $conn->connect_error);
    }

    if (empty($customerName)) {
        array_push($errors, "Customer name is required!");
    }

    if (!preg_match("/^\d+\.\d*$/", $phoneNumber) && strlen($phoneNumber) == 10){
        array_push($errors, "Invalid phone number. Please insert only digits. Phone number must have 10 digits!");
    }

    if (!filter_var($email, FILTER_VALIDATE_EMAIL)) {
        array_push($errors, "Missing or invalid email. Please insert a valid email!");
    }

    if (count($errors) == 0) {
        $query = "INSERT INTO customers (customerName, phoneNumber, email) VALUES('$customerName', '$phoneNumber', '$email')";
        if ($conn->query($query) === TRUE) {
            header('location: view.php');
        } else {
            array_push($errors, "Customer was not created. Please contact administrator!");
        }
    }
}

```

```

function editCustomer($customerId, $customerName, $phoneNumber, $email)
{
    global $conn, $errors;

    if ($conn->connect_error) {
        die("Connection failed: " . $conn->connect_error);
    }

    if (empty($customerName)) {
        array_push($errors, "Customer name is required!");
    }

    if (!empty($phoneNumber) && !is_numeric($phoneNumber) && strlen($phoneNumber) != 10) {
        array_push($errors, "Invalid phone number. Please insert only digits. Phone number must have 10 digits!");
    }

    if (!filter_var($email, FILTER_VALIDATE_EMAIL)) {
        array_push($errors, "Missing or invalid email. Please insert a valid email!");
    }

    if (count($errors) == 0) {
        $query = "UPDATE customers
                SET customerName = '$customerName',
                    phoneNumber = '$phoneNumber',
                    email = '$email'
                WHERE customerId = $customerId";

        if ($conn->query($query) === TRUE) {
            header('location: view.php');
        } else {
            array_push($errors, "Customer was not created. Please contact administrator!");
        }
    }
}

```

➤ [View.php source code file](#)

view.php ×

customers > view.php > html > body > div#main-container.row > div#content-container.col-md-9 > div.row > di

```
1 <?php include('backend-functions.php') ?>
2
3 <!DOCTYPE html>
4 <html>
5
6 <head>
7     <title>Japher Motors</title>
8     <link rel="stylesheet" href="./styles/bootstrap341.min.css">
9     <link rel="stylesheet" href="./styles/main.css">
10    <script src="./scripts/jquery171.min.js"></script>
11    <script src="./scripts/view.js"></script>
12 </head>
13
14 <body>
15     <div id="header-container" class="row">
16         <div id="header" class="col-md-12">JAPHER MOTORS</div>
17     </div>
18     <div id="main-container" class="row">
19         <div class="col-md-3" id="menu">
20             <ul class="nav flex-column">
21                 <li class="nav-item">
22                     <a class="nav-link" href="view.php">Customers</a>
23                 </li>
24                 <li class="nav-item">
25                     <a class="nav-link" href="../booking_flow/calendar_view.php">Bookings</a>
26                 </li>
27                 <li class="nav-item">
28                     <a class="nav-link" href="../inventory/inventory.php">Inventory</a>
29                 </li>
30                 <li class="nav-item">
31                     <a class="nav-link" href="../payments/Payments.html">Payments</a>
32                 </li>
33                 <li class="nav-item">
34                     <a class="nav-link" href="../services/servicesmenu.php">Services</a>
35                 </li>
36             </ul>
37         </div>
```

```

<div id="content-container" class="col-md-9">
  <div class="row">
    <div class="col-md-2">
      <a class="btn btn-primary" href="create.php">Add customer</a>
    </div>
    <div class="col-md-7"></div>
    <div class="col-md-3">
      <form name="searchCustomer" method="POST" class="form-inline d-flex justify-content-center md-form form-sm mt-0">
        <input id="searchCustomerInput" name="searchCustomerInput" class="form-control form-control-sm ml-3 w-75" type="text">
      </form>
    </div>
  </div>
  <div class="row">
    <div class="col-md-12">
      <?php foreach ($customers as $value) : ?>
        <div id="row-container" class="row">
          <div class="col-md-9">
            <p>
              <strong><a href="visits.php?customerId=?php echo $value['customerId']; ?>">?php echo $value["custo
            </p>
            <?php
              $lastVisit = getLastVisit($value["customerId"]);
              echo isset($lastVisit) ? 'Last visit on ' . $lastVisit . '</p>' : '';
            <?php
          </div>
          <div class="col-md-3">
            <div class="row">
              <div class="col-md-6"></div>
              <div class="col-md-2">
                <a class="btn btn-primary" href="edit.php?customerId=?php echo $value['customerId']; ?>">Edit</a>
              </div>
              <div class="col-md-2" id="deleteBtn">
                <button class="btn btn-danger deleteBtn">Delete</button>
              </div>
            </div>
          </div>
        </div>
      <?php endforeach; ?>
    </div>
  </div>

```

➤ Booking main page

JAPHER MOTORS

- Customers
- Bookings
- Inventory
- Payments
- Services

Antioi Blanca

Create new booking

January 2021

day

week

month

<

>

today

Mon	Tue	Wed	Thu	Fri	Sat	Sun
28	29	30	31	1	2	3
4	5	6	7	8	9	10

➤ Inventory main page

JAPHER MOTORS

- Customers
- Bookings
- Inventory
- Payments
- Services

Antoni Bianca

Add Items

Search

Part Id	Part Name	Car Type	Quantity	Price	Action
1	Oil IL	sedan	250	50	Edit Delete
2	Transmission for Audi A8	sport	12	1760	Edit Delete
3	Transmission for Volkswagen golf	sport	20	1330	Edit Delete

➤ Payments main page

JAPHER MOTORS

- Customers
- Bookings
- Inventory
- Payments
- Services

Octavian

Payments

John Smith

Booking reference:

Generate payment

Olivia Jacob

Booking reference:

Generate payment

➤ Services main page

JAPHER MOTORS

- Customers
- Bookings
- Inventory
- Payments
- Services

Services

Add service

Search

Services	Action
Oil change	Edit
Transmission change	Edit