MADI MOVERS (Online Vehicle Rental and Mover System)

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ABSTRACT: The inspiration behind this project is the growing popularity of online website systems and the requirement to explore the messaging (message notification) technology that industries could tap into to enhance their services to the customers. This research paper explained a notification-based content alert and web-based system using short message service (SMS) technology. It is going intentionally developed for the alert notification to the customers about the vehicle rental information, and the availability of the vehicle reserved. The main objective of developing SMS based content alert for vehicle rental system is to reduce the cost and time consumed, which is beneficial to the vehicle rental agencies and customers. Therefore, the system was designed automatically to send an alert SMS to the customers about the availability of the vehicle reserved. This portal is developed based on System Development Life Cycle (SDLC) using the waterfall model as a methodology.

The online vehicle reservations which gives much benefit to user. A rental portal is a portal in which customers arrive to request the hire of a rental unit. It is more easy than carrying the cost of owning and maintaining the unit.

In conclusion, it is a system design specially for large, premium and small vehicle rental business. The vehicle rental portal provides complete functionality of (managing) listing and booking.

Key Words: SMS based, Vehicle Rental Portal, Computerized, Google Chrome, time efficiency.

1. INTRODUCTION

1.1. Project Overview:

This project is created to be used by vehicle rental company specializing in rental vehicles to customers. It is an online platform through which customers can view available vehicles, register, view profile and book vehicles.

Madi Mover (vehicle rental portal) is a web-based system for the users that rents out vehicles. This platform enables the users to make their vehicles available to the public through the internet and also keep records about their vehicles. Many people became interested in the vehicle rental business and hence got involved.

1.2. Objectives:

- MADI Mover app enables users to locate, unlock and pick up it’s scooters cars and bikes at one point, and drop them off at a different point, without the need for a docking station. Our long-term goal is to turn into a 100-city play with dense penetration in key cities.
• **MADI Mover** is resolving the problems of consumers whether it is about to lessen hassles in transportation or simply cut out the expenses of commuting, which is generally one of the major concerns in people's lives. With **Bounce** it is not only simple to commute by being simply available anywhere but cost-effective too.

**2. LITERATURE REVIEW**

- **Bounce** is India's first smart urban mobility solution, with a mission of making daily commute stress-free, time-saving, reliable and convenient. **Bounce** offers One Way Rental service with the all-new keyless scooters, cars, where you can pick up and drop the bike anywhere you need to. Taking inspiration from bounce we are developing MADI Movers with some special functionalities that user can post their vehicle as well.

- **Vogo** is a dock less scooter rental company that lets customers rent scooters for short one-way trips. The company's VOGO box is attached to each scooter and lets customers access the key without any human intervention and start riding. Vogo is the fastest commute option available today in India at a fraction of the cost of other alternatives. Vogo is currently available at limited pick-up and drop-off points across Bangalore and Hyderabad.

The inspirational idea is extracted from **bounceapp.com and vogo.in**

**3. SYSTEM ANALYSIS**

**3.1 Existing Systems:**

- An existing system provides lots of paper work that is manual.
- The user has to go at the place (office) where user can get the vehicle on rent and book their vehicle.
- In the existing system one (user) cannot provide their feedback to the admin online.
- In this system a lot of time wastes because of much manual work.

**3.2 Need for New Systems (Proposed System):**

- A new system provides features like time efficiency to show vehicles details, user profiles and whatever the customer will give the feedback to the admin.
- The new system is totally automated system (computerized).
- This system provides tourism and travelling facilities.
• An enquiry is easily done by user in the system using this platform.

3.3 Feasibility Study: -

The feasibility study is one of the most important thing at the early stage of the project development. This stage requires a lot of efforts to understand the main aspect of the system answer to the question “Is the project feasible?” in this stage the possibilities of project development is identified by conducting technical and operational feasibility of the proposed system.

3.3 Technical Feasibilities: -

Technical feasibility corresponds to determination of whether it is technically feasible to develop the software. It refers to the ability of the process to take advantage of the current state of the technology in pursuing further improvement. The technical capability of the available technology should be considered.

3.4 Operational Feasibility: -

Proposed projects are beneficial only if they can be turned into information system that will meet the organization’s operating requirement. The following areas declare the proposed project as operationally feasible.

➢ There is sufficient support from the management and from the intended users of the systems.
➢ As its backbone developing for all the modules it was necessary that all other people developing other modules agree and due to their support it is operationally feasible.

4. FUNCTIONAL SPECIFICATION

4.1. User Specification: -

• Admin:
  
  Admin can add a vehicle, manage booking vehicle and rent and also view feedback and enquiry.

• User:
  
  User can view information of available vehicle, booking vehicle, easily get the vehicle on rent and also give feedback and can enquiry.

4.2 Module Specification: -

• Check Available vehicles:
  
  It is a platform designed especially for large, premium and small vehicles rental business. The user can check available vehicles and user can book for that vehicles.
• **Booking Vehicles:**
  The user can check available vehicles and user can book for that vehicles.

• **Easily Get the Vehicles on rent:**
  The Customer can easily get the vehicle whenever they need to on the rent with use of this system.

• **Give Feedback:**
  The customer will give the feedback to the admin.

• **Enquiry:**
  The inquiry can easily done by user.

• **Add Vehicle:**
  The admin can add the vehicle so that the user can check(view) the available cars and book the vehicle.

• **Manage Rent:**
  The admin can manage the rent so that the user can check(view) the rent and book the vehicle.

• **View Feedback:**
  The admin easily view the feedbacks and solve the query.

5. **SYSTEM SPECIFICATION**

5.1 **Hardware Requirements:**

  ➢ **Client Side:**
    • RAM: 512 MB
    • HARD DISK: 10 GB
    • PROCESSOR: 1.0 GHz
  
  ➢ **Server side:**
    • RAM: 1 GB
    • HARD DISK: 20 GB
    • PROCESSOR: 2.0 GHz
5.2 Software Requirements:

- **Client Side:**
  - **Web Browser:** Internet Explorer 6 or above version or any compatible browser (Google Chrome, etc).
  - **Operating System:** Windows or any equivalent OS.

- **Server Side:**
  - **Web Server:** IIS 7.5
  - **Framework:** .NET 4.0 with C#
  - **Database Server:** MS SQL Server 2008
  - **Web Browser:** Google Chrome or any compatible browser
  - **Operating System:** Windows Server 2007.

6. PROJECT DESCRIPTION

6.1. System Flowchart:

![System Flowchart Diagram]
6.2. Time Line Chart:

<table>
<thead>
<tr>
<th>Development Phase</th>
<th>0 to 15 Day</th>
<th>16 to 30 Day</th>
<th>31 to 45 Day</th>
<th>46 to 60 Day</th>
<th>61 to 75 Day</th>
<th>76 to 90 Day</th>
<th>Duration (Day)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Requirement Gathering</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Analysis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>15</td>
</tr>
<tr>
<td>Design</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>30</td>
</tr>
<tr>
<td>Coding</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>25</td>
</tr>
<tr>
<td>Testing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>12</td>
</tr>
<tr>
<td>Implementation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>08</td>
</tr>
<tr>
<td>Documentation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>80</td>
</tr>
<tr>
<td>Total Time (Days)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>90</td>
</tr>
</tbody>
</table>

6.3. E-R Diagram:

6.4. DATA DICTIONARY

Admin:

<table>
<thead>
<tr>
<th>Table Name</th>
<th>Description</th>
<th>Primary Key</th>
</tr>
</thead>
<tbody>
<tr>
<td>Admin</td>
<td>Adminis</td>
<td>A_id</td>
</tr>
<tr>
<td></td>
<td>This table is store information about Adminis</td>
<td>A_id</td>
</tr>
<tr>
<td>Sr. No</td>
<td>Field Name</td>
<td>Data type(Size)</td>
</tr>
<tr>
<td>--------</td>
<td>-----------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>1</td>
<td>Adm_id</td>
<td>Int</td>
</tr>
<tr>
<td>2</td>
<td>Adm_Name</td>
<td>Varchar (10)</td>
</tr>
<tr>
<td>3</td>
<td>Adm_Password</td>
<td>Varchar (20)</td>
</tr>
<tr>
<td>4</td>
<td>Adm_Contact_No</td>
<td>Varchar (12)</td>
</tr>
<tr>
<td>5</td>
<td>Adm_E_mail</td>
<td>Varchar (70)</td>
</tr>
</tbody>
</table>

**User Registration:**

<table>
<thead>
<tr>
<th>Table Name</th>
<th>Description</th>
<th>Primary Key</th>
<th>Foreign Key</th>
</tr>
</thead>
<tbody>
<tr>
<td>UserM</td>
<td>This table is provide the information about user(customer) registration</td>
<td>U_Id</td>
<td>-</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sr. No</th>
<th>Field Name</th>
<th>Data type(Size)</th>
<th>Constraints</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Vehicle_Id</td>
<td>Int</td>
<td>Primary Key</td>
<td>It stores vehicle_id</td>
</tr>
<tr>
<td>2</td>
<td>Model_Name</td>
<td>Varchar(25)</td>
<td>Not Null</td>
<td>It stores model name of vehicle.</td>
</tr>
<tr>
<td>3</td>
<td>Brand_Name</td>
<td>Varchar(25)</td>
<td>Not Null</td>
<td>It stores brand name of the vehicle.</td>
</tr>
</tbody>
</table>
4. Color_Name: Varchar(15), NotNull - It stores color name of the car
5. No_of_Pas: Varchar(15), NotNull - It stores information of passenger seats
6. Price: Int, Not Null - It stores price of the car
7. Image: Varchar(60), Not Null - It stores images of car
8. Fuel_type: Varchar(20), Not Null - It stores fuel type in car

Booking Table:

<table>
<thead>
<tr>
<th>Sr. No</th>
<th>Field Name</th>
<th>Data type(Size)</th>
<th>Constraints</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>vehicle_Id</td>
<td>Int</td>
<td>Foreign Key</td>
<td>It references to vehicle_Id from vehicle.</td>
</tr>
<tr>
<td>2</td>
<td>Name</td>
<td>Varchar(20)</td>
<td>Not Null</td>
<td>It stores name of the vehicle.</td>
</tr>
<tr>
<td>3</td>
<td>Date</td>
<td>DateTime</td>
<td>Not Null</td>
<td>It stores booking date of vehicle.</td>
</tr>
<tr>
<td>4</td>
<td>S_address</td>
<td>Varchar(50)</td>
<td>Not Null</td>
<td>It stores source address.</td>
</tr>
<tr>
<td>5</td>
<td>D_address</td>
<td>Varchar(50)</td>
<td>Not Null</td>
<td>It stores information about destination address.</td>
</tr>
<tr>
<td>6</td>
<td>Email_Id</td>
<td>Varchar(50)</td>
<td>Not Null</td>
<td>It stores email address.</td>
</tr>
</tbody>
</table>
Enquiry Table:

<table>
<thead>
<tr>
<th>Sr. No</th>
<th>Field Name</th>
<th>Data Type (Size)</th>
<th>Constraints</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>E_Id</td>
<td>Int</td>
<td>Primary Key</td>
<td>It stores enquiry id.</td>
</tr>
<tr>
<td>2</td>
<td>User_Name</td>
<td>Varchar(20)</td>
<td>Not Null</td>
<td>It stores user name.</td>
</tr>
<tr>
<td>3</td>
<td>Email_Id</td>
<td>Varchar(50)</td>
<td>Not Null</td>
<td>It stores email id.</td>
</tr>
<tr>
<td>4</td>
<td>Contact_No</td>
<td>Varchar(12)</td>
<td>Not Null</td>
<td>It stores contact no for user.</td>
</tr>
<tr>
<td>5</td>
<td>Date_From</td>
<td>DateTime</td>
<td>Not Null</td>
<td>Display date of which the car should take.</td>
</tr>
<tr>
<td>6</td>
<td>To_Date</td>
<td>DateTime</td>
<td>Not Null</td>
<td>Display date that is required date will come.</td>
</tr>
<tr>
<td>7</td>
<td>Query</td>
<td>Varchar(50)</td>
<td>Not Null</td>
<td>It store query of the user.</td>
</tr>
<tr>
<td>Sr. No</td>
<td>Field Name</td>
<td>Data type(Size)</td>
<td>Constraints</td>
<td>Description</td>
</tr>
<tr>
<td>--------</td>
<td>------------</td>
<td>-----------------</td>
<td>-------------</td>
<td>-------------</td>
</tr>
<tr>
<td>1</td>
<td>F_Id</td>
<td>Int</td>
<td>Primary Key</td>
<td>It stores feedback id.</td>
</tr>
<tr>
<td>2</td>
<td>F_Name</td>
<td>Varchar(20)</td>
<td>Not Null</td>
<td>It stores user name.</td>
</tr>
<tr>
<td>3</td>
<td>Email_Id</td>
<td>Varchar(50)</td>
<td>Not Null</td>
<td>It stores email id.</td>
</tr>
<tr>
<td>4</td>
<td>Address</td>
<td>Varchar(50)</td>
<td>Not Null</td>
<td>It stores user address.</td>
</tr>
<tr>
<td>5</td>
<td>City</td>
<td>Varchar(20)</td>
<td>Not Null</td>
<td>It stores user city name.</td>
</tr>
<tr>
<td>6</td>
<td>Postal_Code</td>
<td>Varchar(6)</td>
<td>Not Null</td>
<td>It stores postal code.</td>
</tr>
<tr>
<td>7</td>
<td>Phone_No</td>
<td>Varchar(12)</td>
<td>Not Null</td>
<td>It stores phone no of user.</td>
</tr>
<tr>
<td>8</td>
<td>Service</td>
<td>Varchar(20)</td>
<td>Not Null</td>
<td>It stores service of user required.</td>
</tr>
<tr>
<td>9</td>
<td>Opinion</td>
<td>MAX</td>
<td>Not Null</td>
<td>It stores user opinion.</td>
</tr>
</tbody>
</table>

**Payment Table:**

<table>
<thead>
<tr>
<th>Table Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Payment</td>
<td>This table store information about payment</td>
</tr>
<tr>
<td>Primary Key</td>
<td>P_Id</td>
</tr>
<tr>
<td>Foreign Key</td>
<td>-</td>
</tr>
</tbody>
</table>
7. DESIGN

7.1. INPUT DESIGN

- User Home Page:
  
  ![User Home Page](image)

  - This is home page of user.
Service Page:

This is service page of user.

Registration validation page:

Registration done successfully:
➢ Login Page:

![Login Page Image]

➢ Successfully login:

![Successfully login Image]

➢ Updating password:

![Updating password Image]

➢ Forgot Password Page:

![Forgot Password Page Image]
7.2. OUTPUT DESIGN

- Booking Confirmation:

- User Registration Report:
8. SYSTEM TESTING

The aim of the system testing process was to determine all defects in our project. The program was subjected to a set of test inputs and various observations were made and based on these observations it will be decided whether the program behaves as expected or not. Our project went through two levels of testing i.e. unit testing and acceptance testing.

8.1 Unit Testing:

Unit testing is undertaken when a module has been created and successfully reviewed. In order to test a single module, we need to provide a complete environment.

8.2 Acceptance Testing:

The purpose of Acceptance Testing (AT) is to ensure that the solution by the project meets the functional and non-functional requirements specified in the business requirements. Acceptance Testing is the final step before rolling out the solution. Acceptance Testing is typically carried out by end users in an environment that closely models the real world. A well-managed Acceptance Testing process will give the Project Sponsor, project team and end users confidence that the solution being delivered meets the requirements.

8.3 Test cases:

<table>
<thead>
<tr>
<th>No.</th>
<th>Data I/P</th>
<th>Excepted O/T</th>
<th>Actual O/T</th>
<th>Pass / Fail</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>All files are empty</td>
<td>Error message: “indicates compulsory field(attribute)”</td>
<td>Error message: “indicates compulsory field(attribute)”</td>
<td>Pass</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>2</td>
<td>Email</td>
<td>Error message: Invalid Email-add.</td>
<td>Error_message: Invalid Email-address</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Password and confirm_password</td>
<td>Error message: Both password does not match</td>
<td>Error message: Both password do not match</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Login</td>
<td>Login to the portal should be try with the login assigned by the admin and the correct password</td>
<td>Login should be successful and the user should enter into the portal.</td>
<td>The portal give an error and denied from the Login.</td>
</tr>
<tr>
<td>5</td>
<td>User</td>
<td>Login should be allow and admin get Admin home page.</td>
<td>Login successfully and admin get its admin home Page</td>
<td>Login should be allow and Travel admin get Travel admin home page.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Login should be allow and User get Visitor side User page.</td>
</tr>
<tr>
<td>6</td>
<td>Validation Test cases</td>
<td>Pre-define format must be required in control</td>
<td>System give error to enter valid input</td>
<td>Enter data in a compulsory field with required field validations.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Data must be field in compulsory field otherwise its messages are displayed.</td>
</tr>
</tbody>
</table>
9. RESULTS

10. CONCLUSIONS

In this research paper we have presented some insight on user technology to construct and integrating the web-based system with messaging technology to improve the service provided by the vehicle rental company.

In conclusion, the integration of web-based and SMS technology along with the android app in the vehicle rental portal is the best way to take the advantages of today technology, in order to scale the productivity and efficiency of organization. In real days, messaging(SMS) has been chosen by many users and has in fact, become extremely popular. Despite their restrictions, mobiles devices, especially mobile phones have become a natural part of the everyday life of a huge number of people, especially the younger generation growing up with computing and Internet Technologies.

11. FUTURE SCOPE OF STUDY

- Because of creaky price of fuels, even the vehicles owners also moving to rental system to cut out the expenses.
- Growth of phones and telecommunication system is also the reason for the growth of vehicle rental system.
- Money sharing options and exclusive ways to choose their vehicle.
12. APPENDIX (Important codes only):

```php
<?php
session_start();
include('includes/config.php');
error_reporting(0);

?>
</html lang="en">
<head>
<meta http-equiv="Content-Type" content="text/html; charset=utf-8">
<meta name="viewport" content="width=device-width, initial-scale=1">
<meta name="description" content="">
<title>MADDI MOVER</title>
<link rel="stylesheet" href="assets/css/bootstrap.min.css" type="text/css">
<link rel="stylesheet" href="assets/css/style.css" type="text/css">
<link rel="stylesheet" href="assets/css/owl.carousel.min.css" type="text/css">
<link rel="stylesheet" href="assets/css/owl.transitions.css" type="text/css">
<link rel="stylesheet" href="assets/css/slick.css" type="text/css">
<link rel="stylesheet" href="assets/css/slick.min.css" type="text/css">
<link rel="stylesheet" type="text/css" href="slick/slick.css" />
<link rel="stylesheet" type="text/css" href="slick/slick-theme.css" />
<link rel="apple-touch-icon-precomposed" sizes="144x144" href="/assets/images/favIcon.png" />
<link rel="apple-touch-icon-precomposed" sizes="72x72" href="/assets/images/favIcon.png" />
<link rel="shortcut icon" href="/assets/images/favIcon.png"/>
</head>
<body>

const express = require('express');
const parser = require("body-parser");

var app = express();
app.listen('3000',()=>{
  console.log("server started on port 3000");
});

app.use(parser.json());
app.use(parser.urlencoded({ extended: true }));

const accountSid = 'AC300b75676d4d42acbc3d357ed51a0c349';
const authToken = '236e8c2f358ed9299664c69005c629e';
const client = require('twilio')(accountSid, authToken);

function say(message) {
  console.log("Under say()" + message);
}

app.get('/',(req,res) => {
  client.messages.create({
    from: 'whatsapp:+14155238886',
    body: 'Hello there!',
    to: 'whatsapp:+919717679964'
  })
  .then((message) => console.log('message.sid' + message.sid));
});

app.post('/prompt', (req, res) => {
  const id = req.query.id;
  const vehicleId = req.query.vehicleId;
  const status = req.body.status;
  const photo = req.body.photo;
  console.log(id + vehicleId + status + photo);
  res.send("Thank you!");
});
</body>
</html>
```
13. REFERENCES

- www.code-project.com
- www.bounceapp.com
- www.olacabs.com
- www.vogo.in