

A
Synopsis
of
Project
on
"Go Rent (Website for Construction Vehicles on Rent)"
for
Diploma in Computer Science and Engineering
at



Department of CSE,
Sanjay Ghodawat Polytechnic ,
Atigre, Kolhapur.

(Affiliated to MSBTE MUMBAI)

by

Miss.Dhanashri M. Patil	1716440276
Miss.Prachi D. Jadhav	1716440285
Miss.Nikita P. chougule	1716440288

Guide

Mr. D. J. Dattwadkar

Academic Year

2021-22

1 Abstract

Advancement of technology has influence the development in various fields including booking system. There is abundance of website that provides users to find recommendation hotel to book such as MakeMyTrip, Trivago, Cleartrip, Yatra, Expedia, Airbnb, etc. But for rental Construction Vehicles, it's difficult to find website that provides this service. Usually construction vehicle rental owner not advertise their construction vehicles on internet but instead they only advertise it among the resident. There are plenty of things right from construction field to manpower required. Every person in the construction field needs some different types of construction vehicles like, Bulldozers, Dump Trucks, Backhoes (JCB), Cranes, Loaders, Compactors (like Road Roller), Excavators, Forklifts (Lift Truck), Concrete Mixer Truck, Tractor, etc.

The objective of this project is to provide Construction Vehicles on rent to those people who don't have their own personal Construction Vehicles or needs a Construction Vehicles for the construction of a home building, or a large scale civil or commercial project, where construction vehicles are necessary. As nowadays smart phones with internet is used by each every person in this era. So this website can be accessed by anyone in the construction field, anytime, anywhere. Anyone who wishes to rent Construction Vehicles can visit our website check all the facilities we provide. If the person likes all our facilities features. Book construction vehicles in the form present on the same webpage. While customer can search for any construction vehicle available for rent without having waste their time. Which is very easy to access can be understood by the entire users. Which means the webpage is user-friendly.

2 Introduction

GoRent (Construction Vehicle hire agencies) is a company which rent construction vehicles for short period of time for a fee to their customer. However, some construction vehicle rental agencies still use a manual system to manage rental operations by spreading of their available construction vehicles to local resident. This method is wasting of money time for both rental person and construction vehicle rental owner. Therefore, it is proposed to have a system that can be used to provide booking management to make easier for both of them. This system takes information from the rental person construction vehicles rental owner through filing their details. A user being registered in the website has the facility to book a construction vehicle as required. Construction vehicle rental owner can register their vehicles to advertise for the user.

The goal of the “GO RENT” is to provide construction vehicles on rent to those people who don’t have their own construction vehicles or needs construction vehicle for construction purposes. Along with providing construction vehicles our main goal of developing this project was to make a website which may be easy to access and user-friendly. The Webpage will also be easily available to Windows 10. Besides, computers, the webpage has a minimal version for tablets for those working for the company to easily navigate through the website and book construction vehicle when they are on the road or simply away from the computer.

Languages used in the Webpage-

- JavaScript
- HTML
- CSS
- SQL, etc.

3 Literature Review

Construction Vehicle rental management systems which include the working principle, theoretical methodical contributions to construction vehicles rental management systems, various technologies employed in the field of work. Literature review can help developer to discover any problems of any existed system or research that can be improve in future. The Rental Construction Vehicles web system is a web-based that creates by JavaScript. Our website aims to be a complete solution for a web based construction vehicles rental companies with the support of call center functionality It can be easy for tourist , travel agency ,and Private visitor to online make research , comparison vehicles prices and make reservation , online payment when they travel . It also allows the administrator managed data source in short time. It accepts new reservation vehicles, View vehicles model, view date reservation for vehicles, and travel information so that customers can easy look out travel location they need. The system will add on the new feature like validation form to tell the user key in the correct value. The system wills keep records for the customers, and purchases items. So that administrator can manage customer's reservation lists. the numbers of tasks like generating bill, managing records of stock customer details. The problem occur is to catch data keep correct records of the stock details daily rental vehicles. The goal of our website is to solve all the problem refer above. As well as to fulfil the requirement of our customers. We used web based system for comparing products to enhance our webpage. q

3.1 Thakur, Amey and Karan Dhiman

Proposed a Chat Room to create a chat in website that helps different users to communicate with each other through a server connected. There was no online method of communicating with different users. If the user at the other end is active then they can start a chat session. The chat is recorded in this website.

3.2 Reena Budhathoki and Mohan adhikari

The aim of this thesis is to build an E-commerce website for virtual electronic store called “Electronics”. Website plays a major role in growth and development of any business. It is the most effective way to reach wide number of audiences in no time. Website makes it easy for the businesses to analyze about user’s persona.

3.3 Mohammad Amdadul Huq Teto

The main purpose of this thesis is to create a website for vehicle renting. This website helps the owner to maintain the vehicle business and the user to accepts new reservation vehicles, View vehicles model, view date reservation for vehicles. Both the user and the admin have different rights from their perspectives as well as different credentials.

3.4 Kasia Mikoluk

Proposed web server. It is a simple, lightweight Apache distribution that makes it extremely easy for developers to create a local web server for testing purposes. Everything you need to set up a web server – server application (Apache), database (MySQL), and scripting language (PHP) – is included in a simple extractable

4 Objective and Scope

4.1 Objective of Project

The main objective of this project is to develop a system that allows the construction vehicles rental owner to advertise their construction vehicles allows user to search any type of construction vehicles in this system. below are the objectives of this project-

- To propose a system to manage the construction vehicles rental business.
- To apply technique for user's criteria preference. To test of system functionality of the proposed technique.

4.2 Scope of Project

The scopes for this project are identified to make the system development process easier. The scope will be explained from user aspect of view.

4.2.1 Admin:

- Manage and monitor the application
- Admin can view report.
- Register login profile.
- Register, update, and delete construction vehicles details.
- Approve booking status.

4.2.2 User :

- Register login profile.
- Search for construction vehicles base on criteria Chooses.
- Book construction vehicles

5 Methodology

5.1 Module 1:Introduction Planning Process of Equipment Planning Process of Equipment

- Factors affecting equipment selection, Planning equipment utilization, Equipment utilization chart.

5.2 Module 2:Cost of Owning Operating Construction Equipment

- Estimation of Ownership cost (Average Annual Investment method)
- Elements of ownership cost, Depreciation accounting methods, Cost Estimation using Average Annual Investment method.
- Estimation of Ownership cost (time value method)
- Use of compounding factors in Equipment
- Operating cost components, illustrations on estimation of operating cost
- Equipment cost estimation caterpillarpeurifoy method
- illutrations on use of caterpillar method peurifoy method for estimation of total equipment cost

5.3 Module 3:Equipment Life and Replacement Analysis

- Equipment Life and Replacement Analysis (Part 1)
- Physical life, Profit life, Economic life, Illustrations on determination of economic life of equipment.
- Equipment Life and Replacement Analysis (Part 2)

- Equipment Replacement analysis- Intuitive method, Minimum cost method, Maximum profit method.
- Equipment Life and Replacement Analysis (Part 3)
- Determination of economic life based on equivalent annual cost (using time value concept).

5.4 Module 4:Engineering Fundamentals of Moving Earth

- Engineering Fundamentals of Moving Earth
- Machine Performance-Required power, Available power, Usable power, Rolling resistance, tractive force, co-efficient of traction, Effect of grade on tractive effort, Effect of altitude on performance of IC engines, Performance chart, ways to define payload of equipment.

5.5 Module 5: Earthmoving and Excavating equipment

- Bull Dozers -Bull Dozers-Types of dozer blades, blade adjustments, Blade performance, production estimation.
- Scrapers (Part 1) – Scrapers, Scraper operation, types of scraper, Components of production cycle of scraper and pusher.
- Scrapers (Part 2) – Illustrations on production estimation of scraper and balancing inter-dependent machines.
- Front End loaders – Front-End loaders –loader attachments, productivity estimation.
- Excavators – Excavators-Front shovels and backhoes, operation, factors affecting selection, production estimation.
- Trucks – Production cycle, cycle time estimation, Productivity of trucks, balancing inter-dependent machines.

5.6 Module 6: Piles and Pile driving equipment

- Lecture Piles and Pile driving equipment (Part 1)
- Pile types: Precast and cast in situ piles, pile hammers, principle of pile hammer, factors affecting pile hammer selection.
- Piles and Pile driving equipment (Part 2)
- Types of pile hammer: Drop hammer, Single acting and double acting steam hammers, Diesel hammers, Vibratory pile drivers.

5.7 Module 7: Lifting equipment

- Cranes (Part 1) – Cranes, Crane motions, Principles of lifting mechanism of crane, types of cranes-lattice boom crawler crane, lattice boom truck mounted cranes, telescopic boom crane.
- Cranes (Part 2) – Types of cranes-Tower cranes, Factors affecting lifting capacity of crane, Range diagram.

5.8 Module 8: Concreting equipment

- Concreting equipment (Part 1) – Steps in concrete making process, types of concrete mixer machines.
- Concreting equipment (Part 2) Conclusion – Methods of handling and transporting concrete, Consolidation of concrete, Methods of finishing and curing of concrete.

6 Flowchart

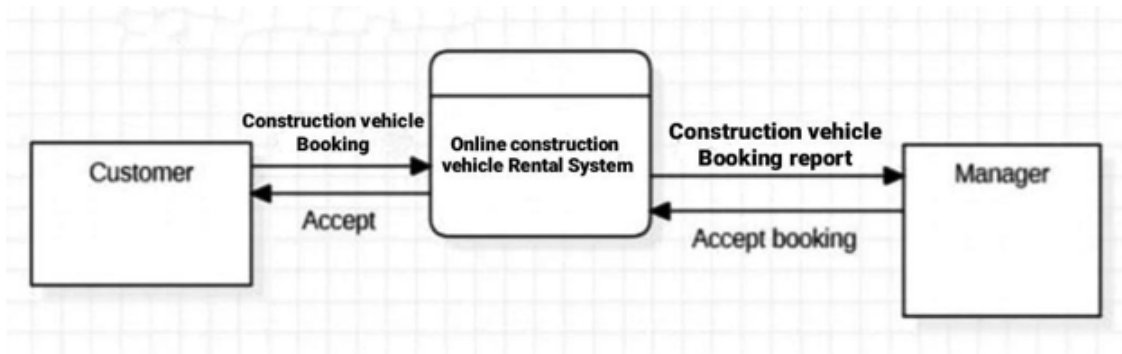


Figure 1: Data Flow Diagram

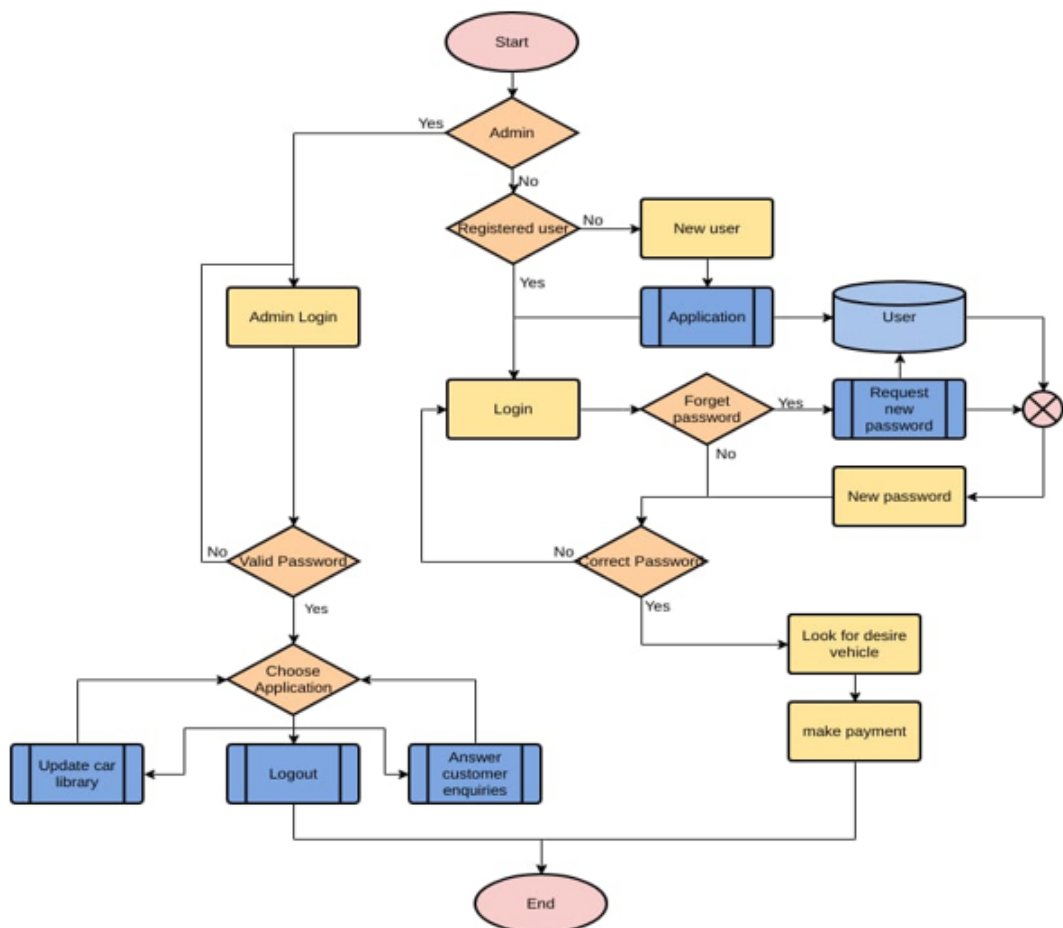


Figure 2: Flowchart of Constructor vehicle

7 System Configuration

Hardware Requirement

- Processor - Intel(R) Core(TM) i5-4300U CPU @ 1.90GHz 2.50 GHz
- System Type- 64-bit operating system, x64-based processor
- RAM- 4.00 GB (3.90 GB usable)
- Device Name- DESKTOP-35SU5RI
- Wi-Fi Module

8 Advantages and Disadvantages of Proposed System

- Companies and people rent equipment for a number of reasons:
 - Saves money in many cases
 - Caters to short-term equipment need
 - Provides specialty performance
 - Satisfies temporary production increases
 - Fills in when regular machines need maintenance or fail
 - Helps meet deadline crunches
 - Expands machine inventory
 - Increases overall capability when and where needed
 - Eliminates responsibility of testing, maintenance, service
 - Makes the project schedule easier to manage with on-demand resources.
- The rental of equipment can enable a bigger company to augment its fleet when and where needed, while it can aid a small- or medium-sized company to propose work that requires specialty equipment or machines to fulfil the requirements. The range of capabilities among equipment of all sizes can help businesses serve niche markets and win new and different kinds of projects.
- Rental options can fill in during an outage or emergency and provide a flexibility that extends to logistics and finance, at a minimum. In addition, competition among rental providers can work to the consumer's advantage with prices, specials and service. Equipment rental appeals to many industries because of its many benefits and advantages.

8.1 The Advantages of Renting a Construction Vehicle

The first major advantage to renting equipment is that it is 100percent deductible. This is because it is part of a cost of goods sold/ material cost on each project that you are pricing it into. This includes the cost of rental and delivery (consult your accountant). This is a major advantage to being a depreciating asset on your books year in and out with ownership. Because you are pricing it into each project, it allows you to be flexible with the piece of equipment you are renting for each project. For example, some projects with tight access require small equipment which means less productivity, but if you have excellent access it makes sense to rent a larger machine to be more productive. This cannot be achieved with owning, unless you are purchasing numerous pieces of equipment. It also allows you to be flexible with the projects that you can take on. From the small projects to the large projects, you do not have the ownership costs of a machine on your books that you need to include in the overhead expenses of every project. There are less costs, less risk when it comes to getting it delivered and picked up, and allows you to get the right tool for the job on every project. You also get to try out a bunch of different models and brands to then choose the exact model that fits your business model and brand that you like when it comes to purchasing.

8.2 The Disadvantages Of Renting A Vehicle

The disadvantages with renting equipment is that there is no ownership on your part of the business. You do not have that asset in your business, so there is no resale value to that machine. Also, there is an inconvenience aspect that comes with renting. Perhaps a certain piece of equipment is in high demand at your local dealer and you need to contact several companies to secure one. There may be an added logistical headache to ensuring that machine is going to be on site when you want it to be much like the delivery of materials. It would be worthwhile when creating a relationship with a local renter to ask them what machines experience high demand at what times in the season and how much time in advance they need to know when you are renting it. This will allow you to plan in advance when renting to ensure you are going to get the machine you want.

9 Expected date and month for completion of work: 3 January ,2022

Table 1: Schedule

Sr. No.	Tasks	Duration in months
1	Literature Survey and Synopsis Preparation	20 September 2021
2	Designing System and Study of Algorithm	22 September 2021
3	Implementation of module 1 and 2	15 October 2021
4	Implementation of module 3 and 4	15 November 2021
5	Analysis	23 November 2021
6	Report preparation	15 December 2021

10 Conclusion

The primary motivation behind this website was to show how this theory functions for clients and how this site was made. Because of time limitations, the emphasis is on the most proficient method to make this site and how clients can convey it. It tends to be hard to begin a site venture without a legitimate vision and arranging. Legitimate arranging is required before beginning a website, which will make it simpler to finish in a brief timeframe. The way toward building this website has very interesting effects on the author in various significant stages. By following all the steps, assembling a site is simple, successful, and quick. Moreover, the idea of the site must be clear and data regarding the site ought to be gathered. After the arrangement was created, programmers give more consideration to the site plan.. Developers make the ideal web architecture with an assortment of websites for web application. At this stage, they must invest more energy at different stages and the website construction is additionally hard without proper planning. When their plan is finished, they will begin working in the execution stage and will have the option to get exact outcomes while making the site. This implies the e is fit to be looked at. Finally, the development work is finished through a site test. After all, everything works out in a good way and the site is well prepared for use.

In summary, the general thought of a web-based business site introduced in this project. Moreover, this makes it simpler for the developer to build a site like this. Picking the correct method to build a site is a harder choice indeed without having good knowledge and skills in a particular field. By picking up information on this site creation the author will have the option to utilize various positions and encounters to make an increasingly unique site later.

References

[1] Thakur, Amey and Karan Dhiman. “Chat Room Using HTML, PHP, CSS, JS, AJAX.” ArXiv abs/2106.14704 (2021): n. pag. <https://doi.org/https://doi.org/10.6084/m9.figshare.14869167>

[2] Reena Budhathoki and Mohan adhikari. 2015 A schematic for comparing web backend application frameworks. Available: <http://publications.lib.chalmers.se/records/fulltext/219826/219826.pdf>. Accessed 02 January 2020. Duckett J. 2014. JavaScript and jQuery: Interactive Front-End Web Development 1st. Accessed 10 January 2020.

[3] Mohammad Amdadul Huq Teto Publishing, Limited, 2013. Available: <https://ebookcentral.proquest.com/lib/copebooks/detail.action?docID=1142875>. Accessed 13 May 2020. Mikoluk. K. 2014.

[4] Kasia Mikoluk How. to use XAMPP to Run Your Web Server. <https://blog.udemy.com/xampp-tutorial>. Accessed 13 May 2020. Available: Date:

January 3, 2022

Place: Atigre

Miss. Dhanashri M. Patil.

Miss. Prachi D. Jadhav.

Miss. Nikita P. Chougule.

Mr. D.J.Dattwadkar

Guide

Mr. S. V. Chavan

HOD