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project interim report

CSIS 3275 Software Engineering

**Project Interim Report**

**Software Scope:**

1. What is your product? Who is the target user? What problem is it solving?

Ans. The car rental is a website used to rent a car for a fixed time period by paying a certain fee. The website can be used to book a car by few easy steps. This application helps the people to rent their car of own choice amongst many cars. The cars are also rented accordingly like for Wedding, Tours, Single need etc. This application will be responsive for the logins from laptop, tablets and mobile phones too. People can check the price of the cars and can make the rental plan

**Target Users:** All the audience who are in desperate need of car for some span of time and cannot afford to buy it.

**Problems Solving:** Our product solves a lot of problems, since users can rent a car anytime anywhere. They can open the webpage to check the available cars and their prices rather than calling the offices directly.

1. Is there any similar system in the market? What are the strength and weakness of these systems? How will your system be different from them, with respect to the user's point of view ?

**Ans .** In the similar system user (or) client will directly interact with the car owner and owner will decide whether the car is available or not. Then if it is available he will give rent a car to the customer. The main drawback of this system is customer need to meet the car owner .this is time waste process.

Weakness :

User should manually go and book the car.

It’s time taking process and cost also.

Doesn’t fulfill the client requirements fully.

Our system is totally covering all the weaknesses of the similar system. In our system there is no cost of signing up to the website. The only cost is of renting a car. Moreover its not time consuming as the single clicks take the customer to the next steps. There is total description of the vehicle under the picture of the each one so that customers doesn’t need to Google anything related to the vehicle.

1. What are its major features/functions? Include at least three major functions you will provide. Submit at least three use cases of these functions .

Ans. The major functions of this application are as follows:

1. The Login Page: The first page allows the user to login or to sign up if you are not already registered on the website.
2. The second page will allow the user to choose from different cities: Richmond, Surrey, Vancouver.
3. Users can select their desired vehicle and can check their features ,and desired dates for booking.

Use Case#1:Register to Car Rental

Primary actor: General user

Goal in context: To register to the Car rental when the user visits the Car rental website

Precondition: Good internet on the device and a user can access the correct URL

Trigger: In the login page, click ‘Sign up’ button

Scenario:

1) User: type the car rental URL to access the system

2) User: click ‘Sign up’ button under log in page

3) User: input the user profile

4) User: click ‘Submit’

Exceptions:

1) The server or database is not installed properly, then it shows error message when click the ‘Sign up’

2) Invalid ID, name and password are input in the registration form: ‘Submit’ doesn’t work.

3) Duplicate ID does not allow in the registration form: ‘Submit’ doesn’t work.

Priority: Essential, must be implemented before login

When available: In the first login page

Frequency of use: Once

Channel to actor: Via web browser

Secondary actors: User manager or Administrator

Channels to secondary actors: Support via email address

Open issues:

1) Is there a way to change the user ID?

2) Should the administrator assign the role to users?

3) Is there a way to approve without user ID?

**Use Case #2** : Change Car Rental Date

Primary Actor: Car Renter

Goal in Context: To change date of when Car Renter wants car

Preconditions: Car Renter has made a rental and wishes to change date of car rental

Trigger: Car Renter has switch the date of when Car is being rented on

Scenario:

1. Car Renter Logs onto Car Rental service site (Enters Username/ Password)

2. Car Renter Selects “My Car Rental” on website.

3. Car Renter Selects “Car Rental” on website.

4. Car Renter Selects “Change Date” on website.

5. Car Renter selects new date for car rental and accepts the new date

7. Car Renter is prompt to enter “password” sent to his/her E-mail to validate the switch

8. Car Renter enters “password” and sees the new date for the car rental

Exceptions:

1. Car Renter denied request, Car Rental date is too close to actual date of the rental,

cannot make change.

2. Car Renter submits wrong “password”; is prompt to re-enter otherwise the date will not be changed

3.Car Renter enters wrong date and accepts changes; is prompt to call Customer service

and talk to representative about issue

Priority: Essential, must be implemented

When available: First increment

Frequency of use: Once per quarter to Registered Members

Channel to actor: Car Rental Website

Secondary Actors: Car Rental Customer Service

Channels to Secondary Actors:

1. Customer Service: Phone line

Open Issues:

1. How many times can a Car Rental member request this service in a given period of time?

2. Should the Car Rental member be charged extra for a convenience fee for using this

service?

**Use Case #3**: Checking Car Status

Primary Actor: Car Renter

Goal in Context: To see if car rental is on route to Car Renter

Preconditions: Car Renter has made a rental in the past and is nearing the time that the car should be delivered to the car renter

Trigger: The Car Renter knows the current information of where his/her car is at.

Scenario:

1. Car Renter: Logs onto Car Rental service site (Enters Username/ Password)

2. Car Renter: Selects “My Car Rental” on website.

3. Car Renter: Selects “Car Status” on website.

4. Car Renter: Observes status of car to know current information on car.

Exceptions:

1. Car Rental service Username/Password incorrect: Car Renter is sent to main page to reenter credentials

2. Password is not recognized: E-mail is sent to Car Renters current E-mail and prompt to enter new password

3. “Car Status” is unavailable: Car Renter is prompt to call Car Rental Service for further

details on Car Status.

Priority: Essential, must be implemented

When available: First increment

Frequency of use: Couple times per day/ week

Channel to actor: Car Rental Website

Secondary Actors: Car Rental Customer Service

Channels to Secondary Actors:

1. Customer Service: Phone line / Online chat support

2. Automated E-mail: Sent to Car Renters E-mail for status request

Open Issues:

1. Should there be an option to opt out of the Car Rental on the day of the Car Rental

date?

2. Should the Car Renter have an option to change what car he/she wants after confirming

what car they decided on(i.e.: going from a stock model to luxury)?

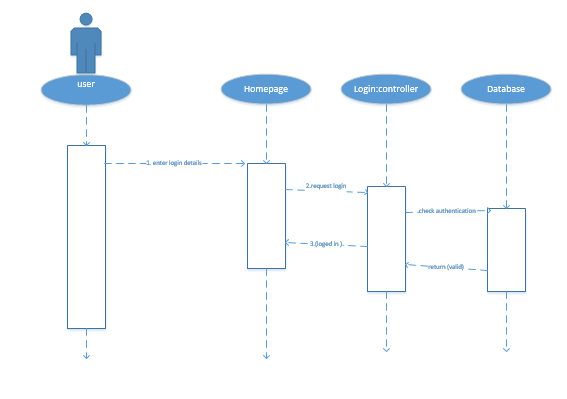
3. How much time does the Car Renter have on their account before an amount of time

has passed before the system automatically logs them out due to inactivity?

1. How is the UI of the software? Submit at least two diagrams/sketches of your software user interface.

Ans:

Login Page:



View Available Cars:

A close up of a sign

Description automatically generated

**Software Toolset**: The front-end stack would consist of HTML and CSS. HTML is very simple to use, CSS will be used to style the layout and design of the WebApp. The backend would consist of Java, PHP. Java is capable of supporting a wide variety of applications.The Framework or Platform we chose for now is Java spring framework which provides a light-weight framework for batch applications, it is also capable of detecting the device and adapt the application behaviour. It will also provide us with extensible templates. For libraries, we think that for a good start we’ll choose Skeleton. Afterwards, CSS libraries like Animation.css would be helpful in making the web pages more eye-catching. All our information about everything from customer’s information to car’s specifications will be stored in the database using MySQL because it is pretty straight forward to use. GitHub is the version control system we’ll use to make any changes in the documentation or web application. Lastly, we found Redmine a good bug tracking system, it is free of cost and can have unlimited users.

**Group Dynamics:** Project manager is the one who is responsible to guide the team and also breaks down the different tasks and functions and then assign the tasks according to people's abilities. If we have to choose project manager our team would like to choose Twinklepreet Kaur as she is having good knowledge about the project and some previous experience too. Other members will have to do the remaining tasks like Analysis, design, development, tests, implementation, tracking and maintenance. Yes, all of us will share development work.

These are the most important roles which team members need to do in order to develop a project. If a disagreement arises, we will check on the matter and see if anything needs to be changed or upgraded in any of the processes and declining towards a solution which is acceptable by all the members.

**Schedule / Timeline:**

*Effort Estimation:* For our Car rental System (Project), we decided that WBS(bottom up) approach is the one we will use, after decomposition of the whole project, we’ll use three-point estimation to arrive at the effort estimation . For now, we haven’t discovered all the aspects of the project needed for the estimation.

*Features Included in the first prototype:*

1. 2-3 Web pages including one home page.
2. User can register/Sign up.
3. Small prototype of the original data display
4. On-click actions
5. Allowing user to click on available car and see more information.

**Risk Summary:**

The major risks that can affect our project are

1. **Performance risk**: We need to make sure that we can fulfill all the needs and meet requirements so that product is fit for use.

2. **Schedule risk**: We need to keep on working on this project in order to finish on time. If anyone is not able to work for some reason it will impact the deadline

3. **Cost risk**: we need to make it pocket friendly and use the resources according to the budget

The worried risk in this project is performance risk because we need to make sure it meets all the requirements and needs of the customer. It should be user-friendly and will include all the features that were not in the system earlier like showing available cars without calling the organization because they might not be able to answer every call and even customers can access the system after office hours to pre-book cars.

So we need to make sure every new feature works perfect and it doesn't create any duplicate records, also it should greet the regular customer and keep their records and history of cars rented. If it makes any mistake the whole system will be affected.

It also needs to be updated all the time with new information about the organization. For example- Price update, location openings or new vehicles added. We also need to add some kind of security to the system so that it can't get hacked and customer with fake information can't issue the car.

To reduce risks :

1. We will make a task set and deadlines for each task and keep track of the tasks that they have been completed according to the deadline. We will make sure every task is completed prior to its deadline so that it can be checked for errors too.

2. We will use efficient methods which will not cost us extra money and try to keep are resources limited to essential ones by not using any extra things. By also making sure that the current team is working properly so that we don't need to hire more people.

3. Before final project we will put our product to test with the customers and do some demos to make sure all the features are working as customer feedback is important.

We will also do peer evaluation before submitting the final product so that there won't be any errors and silly mistakes.

To tackle any problem we will take the help of our team members and communicate with our customer to let them know about the problem so that they can have an idea about what's going on like if our project lags behind the deadline.

To avoid the technological errors we will use flexible model like agile Model so that problems can be resolved at any phase.

References:

[www.cs.fredonia.edu › scialdone › wp-content › uploads › Portfolio](http://www.cs.fredonia.edu › scialdone › wp-content › uploads › Portfolio)