



CS 207: APPLIED DATABASES PRACTICUM

FINAL PROJECT REPORT

CAB BOOKING SYSTEM

‘ CABENATO ’

Submitted by

Group Number – 15

Devansh Agrawal (B20094)

Arman (B20083)

Nilesh Rewasiya (B20117)

Harikrit Khatait (B20102)

Hemant Bansal (B20288)

Shivam Kumar (B20134)

Komal (B20111)

INDEX

S No.	Contents	Pg No.
1.	Acknowledgement	3
2.	Abstract	4
3.	Introduction	5
	3.1 Objectives	
4.	Methodology	6-8
5.	Results	9-12
6.	Data Schema	13-14
7.	Summary	15

ACKNOWLEDGEMENT

We would like to thank our renowned instructor Mr. Varun Dutt and the assigned TA Mr. Naveen Saisreenivas Thota for assisting us in development of the project. Without their valuable guidance and support this would not have been possible. They have given us insights on new emerging technologies. We are obliged for their continuous efforts throughout the making of the project. We hope that they will guide us in our future projects too.

ABSTRACT

Problem Statement –Develop a single page application where a user can register and login with required information and upon login, he/she can book a cab by entering details such as Source, Destination, Car type, Date, Time etc. The list of available cars with the vendor and their booking slot should be shown after entering the information.

Problem Solution – The web application developed by our team gathers the details of users, specifications of journey i.e., pick-up and drop locations and display them available cabs according to their requirement i.e., the type of cab and the time at which they need the cab. In this way, the users can book the cab.

Technologies Used:

1. HTML: HTML code is written in "php" file by opening <html> tag in it. HTML helped in creating and styling the page content a lot. Features like drop down link, form, reference links, buttons etc. are implemented by using HTML.

2.CSS: Bootstrap- Used to design and customize our web page. It is world's most popular front-end open-source toolkit, responsive grid system, extensive pre-built log-in components etc.

3.PHP: PHP is a server scripting language, and a powerful tool for making dynamic and interactive Web pages. PHP supports many database management systems including MySQL, MariaDB, Db2, MongoDB, Oracle, PostgreSQL, and SQLite.

4.MySQL: MySQL is a relational database management system based on SQL – Structured Query Language. The application is used for a wide range of purposes, including data warehousing, e-commerce, and logging applications. The most common use for MySQL however, is for the purpose of a web database. It can be used to store anything from a single record of information to an entire inventory of available products for an online store.

5. Python: Python is one of the most popular and versatile programming languages out there and can be used to build applications of several kinds. For web applications, Python enables developers to build the backend or the server-side. In our project we python to create dataset of "drivers" by using different modules like names, NumPy.random,etc.

INTRODUCTION

CABENATO is a web – based application primarily used to book cabs to travel from one city to other. It is reliable, convenient to use, time –saving and economical as well. The users can rent any cab for some time by paying fee which depends on the distance to be travelled. The details of cars we offer, their respective pricing in terms of cost/ Km and various features can be viewed on the home page itself by clicking various buttons on navigation bar.

Our web application supports every feature required by the user. It is designed using front end and backend technologies to provide a good interface to the users. The front end technologies used include HTML5 and CSS with bootstrap framework and the backend is designed using PHP, MySQL and python. Our lives revolve around technology round the clock so it is better to use it in a productive way. The application is very handy and user friendly.

OBJECTIVES

- 1.To let users, book the cab anytime round the clock based on their schedule.
2. To choose from a variety of cars according to the requirement.
3. To allow transparency to the users and the cab driver since complete details of the driver, cost/km is displayed to the user.
4. To let users experience the pros of new emerging technology and make the ride worth travelling.

METHODOLOGY

Various features of our Cab booking system along with methodology used are as follows:

1.First open form.php on your localhost. You will see two buttons for signup and login. The buttons are created using <button> attribute and i.e., anchor tag with href attribute is used to link these buttons to sign up and login page respectively. With the help of CSS and bootstrap, we styled our page for adding background image and decorating input fields in the login and signup.

2.When you input your data in the signup page it is sent using POST method to signup.php to ensure if the given information meets certain demands. Demands like unique email id, length of password should be at least greater than 8 , confirm password and password are same and none of the input field should be left empty.

3.If user completes above mentioned criteria, it will show a message that the registration is complete and if you miss any check, it informs you specifically what you missed so that you can try again without repeating it. If your all checks were successful then it will add your data into table "customer" in database named "Mandicab" by running a query in php.

4. When you complete above process you are redirected from signup.php to form.php with the help of "header" function in php.

5. Now you can successfully login to our main site. For that you have to now enter your registered email and password into login form. Once you enter the data it is sent to login.php to check if this email is registered in database and password entered corresponding to this email is same or not.

6.Above checks are made with the help of php using if and else condition on query result of mysql. If the entered email is not in the database or if wrong password is entered you will be redirected to form.php where it will again show you an error message.

7. Now if the entered email id and password were correct there are two possibilities, either you are an admin of site or a regular user. Based on that you will be directed to two different pages. By default, everyone is a regular user so you will be redirected to home.php and your email and password will be stored for your current session in "\$_SESSION" which is a superglobal array like structure with the help of which we can access entered data across many php files.

8. If you are the admin, you will be redirected to admin.php with the help of "header" function where admin can see last 10 booking details of different customers. The admin page is styled with help of CSS and bootstrap with a "Sign-out" button in top right corner and booking details are shown with the help of <table> tag and mysql query running in the back and showing result from "booking" table in database.

9. Now if you are a customer (regular user), you are redirected to home.php which is styled with bootstrap and CSS and contains information about Cabenato.

10. In the navigation bar you will see many sections like "home", "car", etc. which are attached with drop down link using html. You will also see your name and a sign out button in the top right corner. The page contains price of different cars, car images and many more information related to cabenato.

11. In the first section of the page you will see a form asking for information about your pickup, drop location, time, date and car type. The input fields are styled using bootstrap and html such that it is easier for user to fill it. A drop-down list in "pickup" field containing list of cities to choose from is displayed and calendar appears when you are choosing a date.

12. When you fill the form and click "Search Cab" button, it sends your information to result.php and you are redirected to it, where first it makes few checks like input date is greater than current date, pickup and drop location should not be same etc. using php and if you fail, you are redirected to home.php again with an "Alert" showing for what check it failed. Alert function is used to display message in home.php which we get by "GET" method from result.php .

13. To create the dataset, we created Driver.py. This python file uses different modules like "names", "numpy.random", "mysql.connector" and "datetime". To create this random dataset and connect it, we inserted table "driver" and "driverinfo" in our database mandicab .

14. Now there are few special checks also like if a driver is already booked for that day he should not be available for booking. This can be done by checking if that driverID is booked for that day in "Booking table" in the database if so then we do not show that driverId in table in result.php. We do this by using while loop and simple if /else condition by checking the query result of sql in php with help of inbuilt functions.

15. Now user has to input one of the driverID shown in the table in result.php and click "Book Now". When the user submits his response all his data is sent to mail.php and goes through some checks again.

16. If the driverID entered by user is not one of the drivers that are available, the user will be redirected to home.php and an alert message will appear below navigation bar which is sent through "GET" method in php.

17. If correct driverID is entered, 'booking' table is updated through php and a mail is sent to user's registered email through mail function in php and user is redirected to home.php with a confirmation message through 'header' function.

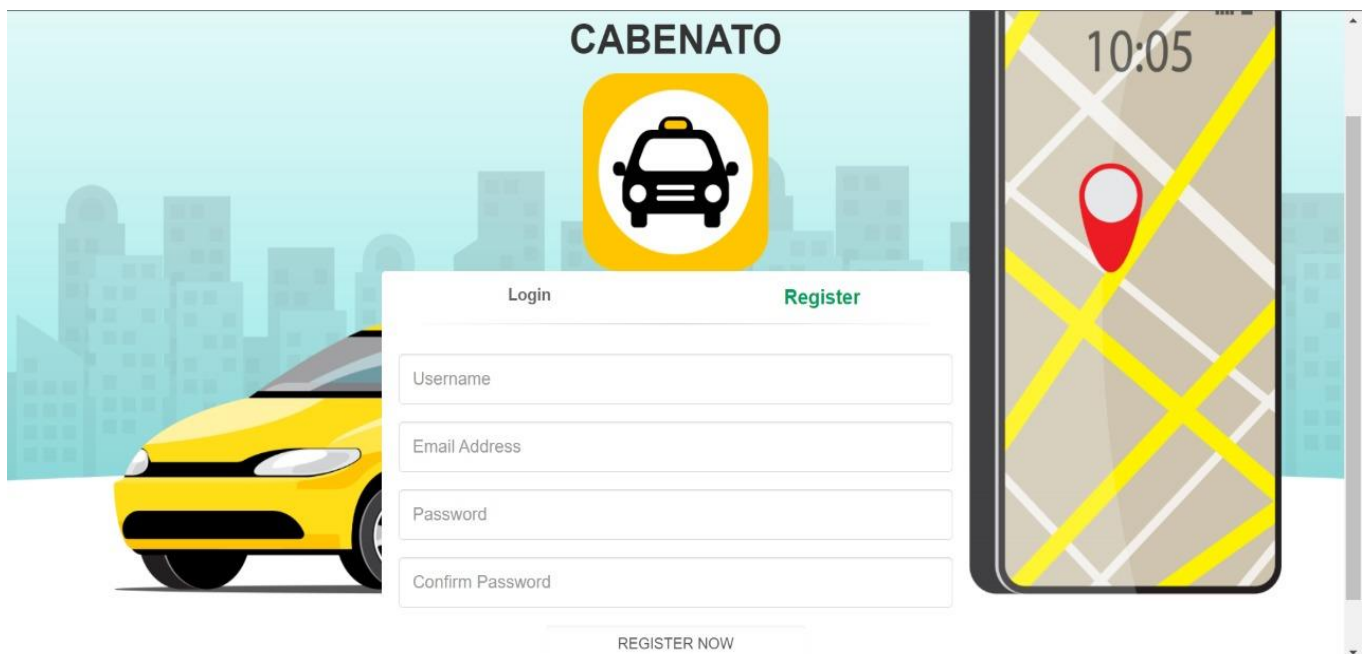
18. Since user has already booked a cab, he can sign out of the site by clicking the "Sign-out" button which is linked to "form.php" through '<a>' tag using 'href' attribute.

Note: Due to some time constraints (and also because it was not part of our End sem project) we were not fully able to implement different functions and give special privilege to Admin in Admin.php . We will add those features to our site in the near future. By that admin will be directly able to cancel, check or make any changes in any booking process of our customers.

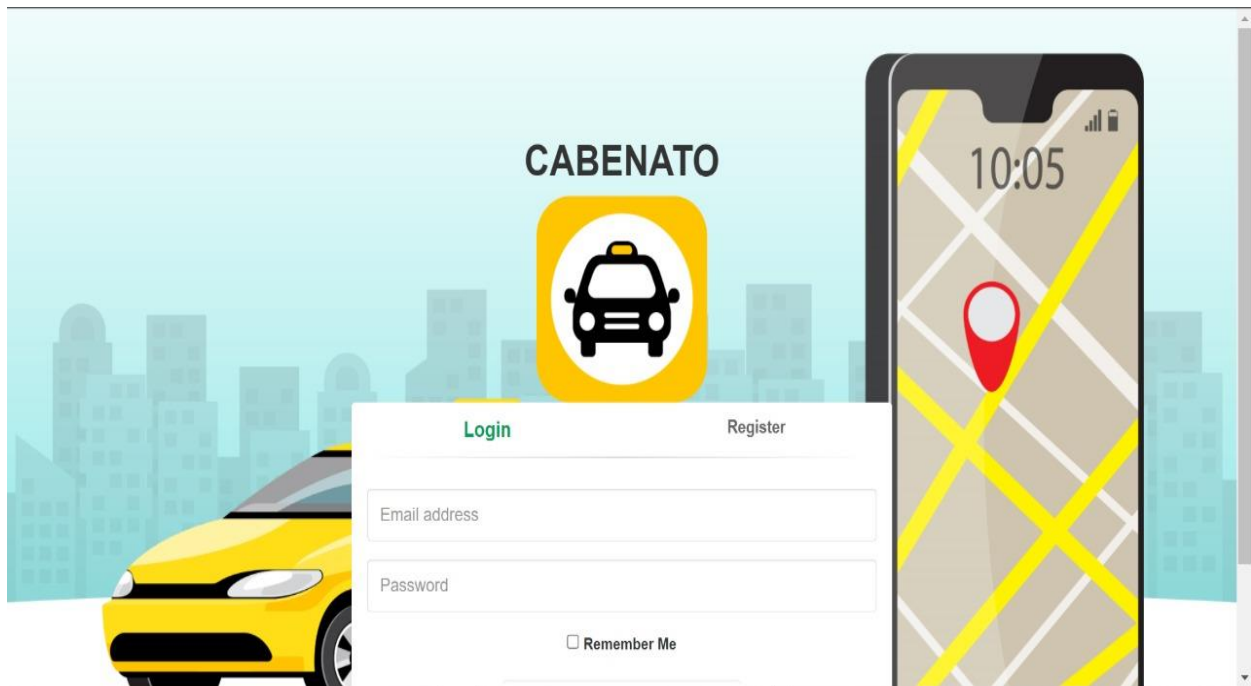
RESULTS

How to book a cab?

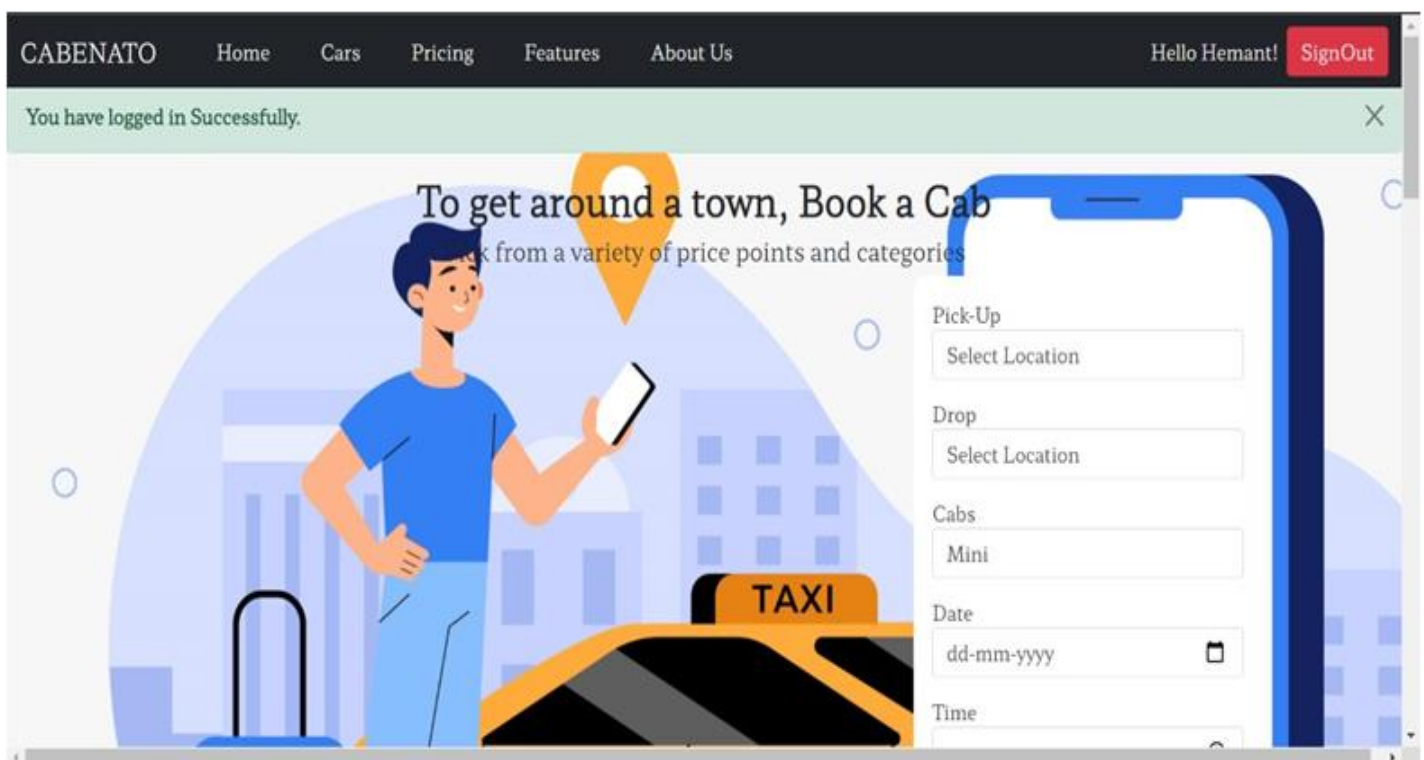
- Open the application in a web browser. The new users have to register themselves by entering the required details such as username, email id and set password according to mentioned criteria and then confirm password. After entering all the required details click on register now. Here's a glimpse of the page.



- The users who are already registered have to login by entering the required details such as email id, password. The page is shown as follows.

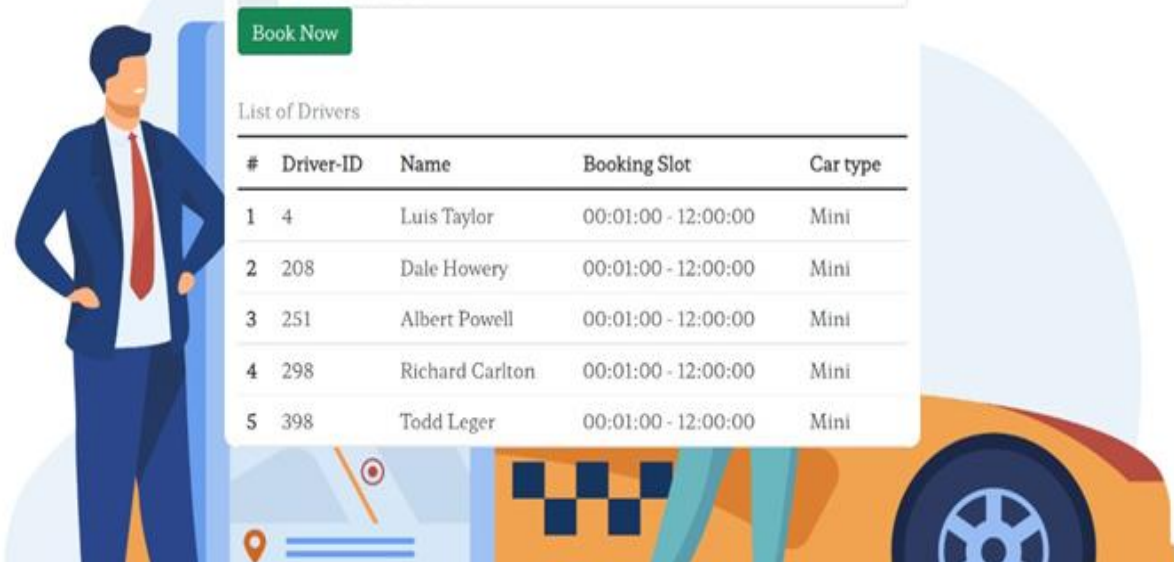


- After successful registration, the application will direct the users to a new page where they can enter the details like pick – up location and destination i.e., drop – location. The users have to select date and time in the specified format. The interface is shown as follows.



- Our application provides an option to select from a variety of cabs according to the need. This can be done by clicking the “Search Cabs” button. It will direct the users to a page where they can pick any cab from a list of available cabs. The type of car ranges from Mini, SUV, Sedan to luxury which differ from each other in pricing i.e., cost/ Km and accommodation space. The page is shown below.

Select Your Cab



Cabs Available

#

[Book Now](#)

List of Drivers

#	Driver-ID	Name	Booking Slot	Car type
1	4	Luis Taylor	00:01:00 - 12:00:00	Mini
2	208	Dale Howery	00:01:00 - 12:00:00	Mini
3	251	Albert Powell	00:01:00 - 12:00:00	Mini
4	298	Richard Carlton	00:01:00 - 12:00:00	Mini
5	398	Todd Leger	00:01:00 - 12:00:00	Mini

- After completing all the above mentioned steps, the process of booking finishes which will be notified to the user on his registered email id and the user will be redirected to the home page where he/ she can book another cab by repeating the same steps.
- The user can sign –out anytime from the window by clicking ‘Sign out’ button present at top right corner of the web page.

- For admins the interface after successful login is different from regular users. The latest booking details of users will be displayed to the admin which include email id, booking id, driver id and booking date. To enter Admin page you have to use a special email and password which is: [Email="nrewasiya@gmail.com"](mailto:nrewasiya@gmail.com) and password="9752452576". When you enter this you will be redirected to Admin.php. It is shown below.

SignOut

Welcome to the Admin Page
Booking history

Latest Cab Booking Data

#	BookingID	CustomerEmail	DriverID	BookingDate
1	30	b20288@students.iitmandi.ac.in	142	2021-11-22
2	29	b20288@students.iitmandi.ac.in	918	2021-11-30
3	28	b20288@students.iitmandi.ac.in	246	2021-12-13
4	27	b20288@students.iitmandi.ac.in	560	2021-12-16
5	26	b20288@students.iitmandi.ac.in	949	2021-12-01
6	25	b20288@students.iitmandi.ac.in	455	2021-12-31
7	24	b20288@students.iitmandi.ac.in	191	2021-12-30
8	23	b20288@students.iitmandi.ac.in	238	2021-11-20

DATA SCHEMA

Our database 'mandicab' contains four tables which are described below:

- a. 'Customer' table showing user inputs like their passwords, email ids and designation.

```
MariaDB [mandicab]> describe customer;
```

Field	Type	Null	Key	Default	Extra
Serial_No	int(11)	NO	PRI	NULL	auto_increment
Name	varchar(30)	NO		NULL	
Password	varchar(30)	NO		NULL	
Email	varchar(30)	NO		NULL	
Category	varchar(8)	YES		User	

5 rows in set (0.016 sec)

- b. 'Driverinfo' table showing name of drivers, driver id and their respective car models.

```
MariaDB [mandicab]> describe driverinfo;
```

Field	Type	Null	Key	Default	Extra
ID	int(11)	NO		NULL	
Name	varchar(255)	NO		NULL	
Car	varchar(255)	NO		NULL	

3 rows in set (0.021 sec)

- c. 'Driver' table contains similar information to 'Driverinfo' with some extra columns showing their available time slots and the city they serve.

```
MariaDB [mandicab]> describe driver;
```

Field	Type	Null	Key	Default	Extra
ID	int(11)	NO	PRI	NULL	
Name	varchar(255)	NO		NULL	
StartingTime	time	NO		NULL	
EndingTime	time	NO		NULL	
City	varchar(255)	NO		NULL	
Car	varchar(255)	NO		NULL	

6 rows in set (0.013 sec)

- d. 'Booking' table contains records of booking details of users. The columns contain data about the customers, drivers and their journey specifications.

```
MariaDB [mandicab]> describe booking;
```

Field	Type	Null	Key	Default	Extra
BookingID	int(11)	NO	PRI	NULL	auto_increment
CustomerEmail	varchar(255)	NO		NULL	
DriverID	int(11)	NO		NULL	
Pickup	varchar(255)	NO		NULL	
Pickup_time	time	NO		NULL	
Pickup_Date	date	NO		NULL	
Drop_Location	varchar(255)	NO		NULL	
Car	varchar(255)	NO		NULL	

```
8 rows in set (0.013 sec)
```

SUMMARY

Our web application has been designed by considering all the necessary features which a user requires such as registration, login and the details of journey. We have explained the objectives, features, technologies used, methodology i.e. step by step discussion on how the page is actually designed in the front end and works at the back end. The interface of the page after every step during booking process is also added. The data schema is shown to make you ensure that the details of users after every activity are stored at the backend. The project has really increased our interest towards web development and we enjoyed working on the project. We are learning and optimizing new technologies to fit the needs of people and the application will be upgraded from time to time to enhance the performance and features. We should use the technology in a wise manner so that it serves the community in every possible way.

The references used are as follows:

<https://www.geeksforgeeks.org/>

<https://stackoverflow.com/>

<https://www.w3schools.com/>

<https://getbootstrap.com/>

<https://www.mysql.com/>