

EECE 351 - Fall 2022-2023 - Final Project Report

American University of Beirut

Saadallah Itani
Lynn EL Hariri
Jad Ghamloush
Mahmoud Yamani

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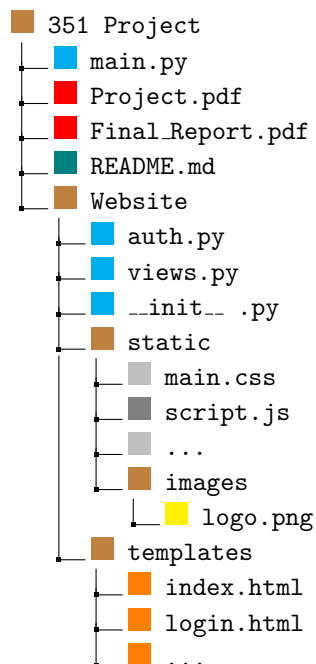
Introduction.

We as a team were tasked to develop a hotel reservation system. A general-use system that can be enabled to perform general basic front-desk activities of a hotel. Some of the basic functionalities include creating a new account for a new user, logging in to that account, viewing and editing the profile details, reserving a room in the hotel, viewing and writing reviews, and logging out of the account. The first thing a new user can see is the homepage of the system which includes some of the user reviews and some of the available services the hotel offers, and the options to login to an existing account or sign-up for a new one. We named our hotel, "Hotel California", in reference to the infamous 1976 Eagles song.

This project GitHub repository: 351 Project

Code Structure.

We divided the multiple files of python code, HTML templates, CSS files, etc ... into an organized directory structure which can be described as the following:



The directory of the project is inside the 351 Project folder which contains all the other files and folders of code, templates...etc. Inside it, we can find the main.py file which we will run our application with. We can also find :

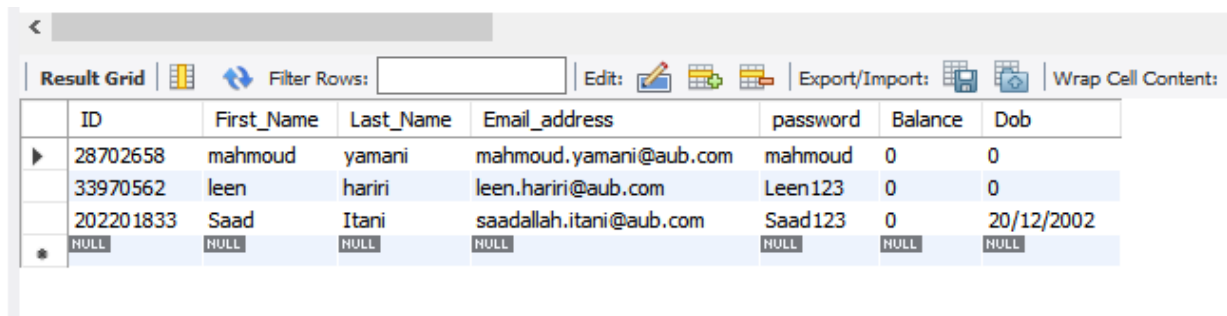
- README file which includes a small description of how to run the clients and servers.

- The auth.py file which includes all the functions related to the authentication of a user such as login, logout, signup..., and it also includes the flask app.
- The view.py contains all the other functions unrelated to user authentication such the room reservation, invoice generation, ...
- We can also find an init.py file which helps in importing certain functions and modules.
- The static folder contains the CSS and the images folder which are linking files to an HTML template that defines its style and layout.
- The templates folder includes the HTML templates which implement the front-end.
- The main.py python is the file from which we can run our app and access its generated link from.

Database Design.

The general design of the database was distributed into two main tables where we have a users table which contained all the user information from a generated ID, email address, password, ... etc. We also had a rooms table which had an ID, First Name, Last Name, Email address, password, and Balance and Date of birth.

An example illustrating the users table structure:



	ID	First_Name	Last_Name	Email_address	password	Balance	Dob
▶	28702658	mahmoud	yamani	mahmoud.yamani@aub.com	mahmoud	0	0
	33970562	leen	hariri	leen.hariri@aub.com	Leen123	0	0
	202201833	Saad	Itani	saadallah.itani@aub.com	Saad123	0	20/12/2002
✱	NULL	NULL	NULL	NULL	NULL	NULL	NULL

Feaures and Decisions taken

- View Profile: this feature is implemented for signed-in users who want to check their profile/account personal info. To do so, the user has to log into his/her account, then enter the profile page. There the user can view his/her: email, phone number, date of birth, ID number, phone number, password etc...
- Change password: this feature allows the user to change his/her password. To do so, the user should enter the "forgot password?" found in the login form, then the user must enter the email that he uses for his account, a new password, and a confirmation of the new password. if any of the fields is empty, the page will display the following message " please fill out the form!". if the password and the password confirmation don't match, the following message will appear " Confirm password is not equal!". if all fields are filled correctly, " password updated" will be displayed indicating that the user successfully changed his/her password.
- Edit Profile: this feature allows the user to alter any of his personal information. To do so, the user must be logged in with his usual email and password, then he must enter the " edit profile " feature. There, he can change any of his first name, last name, date of birth, phone number, email, ID number, etc... If the user enters his first/last name incorrectly, the following message will be displayed " name must contain only characters and numbers !". Or if the user enters an invalid email address, the following message will appear " Invalid email address!". if any of the fields are empty, the following message will be displayed " Please fill out the form !". If all is correct, all modifications will be saved to the user's profile, and the following message will appear "user updated!" (Unfortunately, we could not finish the implementation of this feature due to the errors we faced and the lack of cohesive front-end template to accompany this feature with).
- Reserve a Room: allows users to reserve rooms. The user must input the check-in date, check-out date, type of rooms, and the number of rooms he wants to reserve, then the user must press on " book now" to proceed. Prices of different services/types of rooms are present on the booking page. There are options to have a sea view, mountain view, breakfast, lunch and dinner, all in different price ranges.

Members Contribution.

- **Saadallah Itani:** Saad's work focused mainly on the back-end part of the project, where he implemented the project directory structure of the project. He initialized and laid out the basics of the flask app and connected it with the MySQL database. Saad also worked and assisted on the front-end part of the project where he laid out the connections between the front-end and the back-end, by connecting the HTML templates with their functions and routing them with their appropriate URLs, and laid out the blueprints for the auth and view files which implement the authentication and reservation functions respectively. Saad also assisted with the change password and view profile functions and various other issues faced front-end and back-end. Saad also wrote this report, and always took the initiative in organizing team meetings.
- **Lynn El Hariri:** Lynn's work focused mainly on the back-end part of the project where she implemented the password_change, view profile, and edit profile. Lynn also assisted in writing this report.
- **Jad Ghamloush:** Jad's work focused on working on the front-end part of the system where he implemented the HTML templates of each function and attached their accompanying CSS files which laid out the general design of our system.
- **Mahmoud Yamani:** Mahmoud's work focused mainly on the reservation and booking of rooms where he laid out the main structure of the tables of the rooms database, and implementing the rooms reservation functions.