# Internet Applications Course Project – Fall 2020

# (20 Grades)

As per "Internet Applications" course plan, students are required to form teams and design and develop an Internet application using Java-based technologies (namely JSP and servlets) and MYSQL as the database management system of choice. The purpose of this project is to exercise concepts and techniques learned in the class and experience the full life cycle of web application development. This document contains the rules that govern the project mechanics, the deadlines and expected deliverables for this term project

## Rules:

1. Teams should be three students maximum.
2. Teams should not span different groups (Must be from the same lab).
3. The project should be developed using JSP/Servlets.
4. The project should store the data in "MYSQL" DBMS.
5. It is recommended to use NetBeans, but this is not mandatory.
6. Two projects are available, and each team should pick only one.
7. The deadlines will be enforced strictly.
8. Delivery will be on your lab time week starting (16-01-2021) – if any changes it will be announced on the blackboard

## General Requirements:

1. Every project must include mechanisms for signing up, signing in, and signing out.
2. Signing up process should include the following
    a. The form must use a captcha whether online or offline like "google captcha" …etc.
    b. During the registration the user will not supply a password
    c. After the form submission an email (real email you can look at java mail as an example) will be sent to the user with a generated temporary password to login the application with it.
3. All users should be able to change their information in the profile page like password, display name…etc. except for the username.
4. Sessions must be enforced with the user's interaction.
5. The project must use a unified CSS style for all the pages you can build your own or.
6. Ajax should be used in at least three different scenarios including signing up (to check if the user registered before).
7. All input forms must be validated either by using HTML5 controls, Java script or jQuery
8. Every interaction from the user must be presented with a proper feedback from the system like success / failure messages, alert…etc.
9. Usage of "Hibernate" for the DB communication is encouraged.
10. Meaningful data examples should be present in your database at least five examples in every table are presented.
11. The word "Manage" in the requirements is translated to all the CRUD operations (Insert/add – Update – Delete – Select)

# Hotel Reservation system (https://www.booking.com/)

## Description:

Most of us know the popular travel reservation website booking.com

You are required to develop similar web application

User groups:

There are two user groups which are client (a person who wants to book a hotel room) and hotel reservation admin (a person who is responsible to manage reservations)

## Minimum required functionalities:

For client (user group)

1. Search for a hotel in which user needs to specify (where he/she is going, the check-in date, check-out date as well as the number of adults and children).
2. View a list of hotels according to user research along with enough information about the hotel (such as hotel name, hotel rating, availability, expected price ... etc.)
3. Client should be able to choose one of the search-result hotels and see more information about it (rooms available, room type, room facilities etc.)
4. View hotel photos
5. Client can filter hotels search-result by these categories (price, user rating, hotel's stars, distance from the governorate city center, including meals, etc.)
6. Client should be able to view the hotel on Google maps
7. Make a hotel reservation.
8. Change / Cancel reservation.
9. Rate Hotel (stars system and comments)

For hotel reservation admin (user group)

1. Check clients in and out. Today
2. View a list of reservations (current) Today
3. View reservation history for a specific period (from date – to date) Tomorrow
4. Search for a client and view his / her information (for example user phone number as well as email) in case s/he needs to contact the client and confirm reservation. Tomorrow
5. Cancel reservation Tomorrow
6. Get notification upon client cancellation by email (real email message – can use java mail or any other email libraries) and on the system
7. Confirm reservation payment Tomorrow
9. Update hotel basic information (contact information, hotel facilities, add location, other branches information)
10. Upload and update hotel photos
11. Add / update room information
12. View hotel rating and client's comments

# Staff Member office hours management

## Description

Due to Covid-19 pandemic and other conditions managing office hours for staff members (Drs. And Tas.) became a hectic problem with a rising difficulty for the student to keep track and know the available office hours. This project tries to address this problem.

There are two user groups which are “Students” and “staff Members”.

## Minimum required functionalities:

### For students:

1. Find staff of each subject.
2. Find the contact for a specific staff member.
3. View the office hours schedule for the staff member.
4. Reserve an appointment with staff member at specific slot and date.
5. Cancel a meeting reservation.
6. Message staff member of specific subject (specific TA, Dr or all subject Tas…etc.) directly.
7. Get notification on the day of the meeting by email (real email message – can use java mail or any other email libraries) and on the system.
8. Get notification of a reservation cancellation same as requirement No.7

### For Staff Members:

1. View and reply to students’ messages.
2. Message specific student or other staff members.
3. Message subject team (other Drs. And Tas. Of the subject).
4. Search for a student and view his/her contact details.
5. View reservation on a specific office hours slot.
6. Cancel slot reservations on a specific date or all the slots on a certain day
7. View history of reservations by (slot, from date – to date …etc.).
8. Manage office hours slots (time, online / offline, location …etc.).
9. Get notifications of messages and students’ reservation by email (real email message – can use java mail or any other email libraries) and on the system.
10. Get notification of a reservation cancellation same as requirement No.8
11. Get notification on the day of the meeting same as requirement No.8