**CS 6314 - Web Programming Languages - Final Project**

Online Property Management - Airbnb

Each project should include following major functionalities:

* User signup: Register a new user to the system.
  + Form validation: Check if all mandatory fields are filled out.
  + Check if password is strong enough. Define the rules of having a strong password. User passwords should be hashed, and only encrypted version of passwords should be stored in the database.
* User login
* List all properties in the system. Users will be able to “Search” for a specific city and/or property type.
* Users will add properties to their favorite list, access their favorite list and remove properties from the list.
* Users will be able to rate a given property. They will also enter their feedback/comments.
* Users will be able to sign-up for a host account (Become a host). They will add properties to the system, update property details (description, amenities, price, cleaning fee etc.) and delete them from the system (mark them as unavailable). For adding a property, they should be able to upload picture(s).
* Users will make reservations. For making a reservation, availability of the property should be checked.
* For users, reservations (both past and future) will be listed along with reservation dates. They should be able to cancel the reservation if it is before 48 hours before reservation date/time.

**Front-end design**

You can use Bootstrap and Bootstrap templates for user interface design. You can also use design tools. You will be free to have your design choice but it’s important to have a professional look for all pages (i.e. the same menu or navigation bar appears on top of every page etc.).

**Back-end design**

You can use relational databases or MongoDB for database component.

For server side scripting, you will use Node.JS and Express.js and create an API.

You can consume the API and build your user interfaces by using Javascript (AJAX) or React.

**Project Report**

Project Report should include following items:

* Name for the Website
* Database Design: Database structure including the tables and primary and foreign key definitions on tables. Alternatively, you can include your “Create Table” statements to show your database schema. In case you use MongoDB, provide information about your data model (example objects).
* Screenshots for main functionalities (5-6 screenshots will be sufficient)
* Team Members: Names and Net-IDs for team members. Include the section number for each member.
* Work division among team members: who has completed which part (be specific and try to give page names). Please note that every team member should be actively involved in every step of the project development (database design, client-side and server-side development) and work should be equally divided between team members.

**Deliverables:**

Each team is responsible for sending following items for final project submission:

* Project report. File name should be Teamnumber.pdf.
* Source files (zip your project directory)

Project presentations will be made during class sessions on **Dec 5th**and **Dec 7th**.

If you cannot present during your assigned date, you will send a video recording of demo along with project report (-5 points of penalty). In the video, you will walk viewers through all main functions of the website. The video should be between 3-5 minutes long and video link should be added to the end of project report.

Project report submission deadline is **December 11th, 11:59pm.**