COMP 307

Course Project

Due: Multiple due dates, see text

You are building a complete website with a team of 3 or 4 students. Your website must have as a minimum: a front-end, a back-end, and a database. Your website can be about anything (legal). You can create your website using any language you like, even ones we did not cover in class. You will need to get my okay. Once you have picked your team, the project, and the technology, then make an appointment with me.

You must code over 70% of your website from scratch. This is important. We are computer science people and we need to know how to program.

The best way to organize the work for the website is to divide the project into distinct areas and assign an area to one of your teammates. Make sure that each team member has been assigned an equal amount of web development work (creating PowerPoint slides and writing documentation does not count). This is important so that the working relationships and grading can go smoothly. If one team member fails to do their work then **it will only effect their grade** since the work was divided into distinct equal sized units.

Please follow these steps:

Step 1: Get your team proposal accepted by the professor (No later than October 31st)

- Team: select a team of 3 to 4 students.
- Project: your website can be about anything. Meet with your group and come up with a useful website that is exciting to your team.
- Select a team leader to communicate with the professor
- Team leader meets with the professor to get the projected approved
- Add your team to the Google doc (please populate all the **student** tabs) https://docs.google.com/spreadsheets/d/1bYB6EFQAKia8EAVcYIq5F-cSA2-dRBp4By6WfAVrio4/edit?usp=sharing

Step 2: Make an appointment for your presentation (No later than November 9th - Google doc 2nd tab)

- Appointments will be scheduled backwards, latest date to the earliest date, FIFO.
- Each presentation must be 15 minutes long. All your team members must speak. I will stop you at the 15th minute, finished or not. You may be tempted to speak quickly – don't. Better fewer slides and slower talk. Your presentation is 10 minutes long, then a short demo for the students, and 2 minutes for questions, and one minute for setup.
- Provide only the following slides:
  - (1) Have a title slide with your project name and your team member's names,
  - (2) Describe what your application is about, use 1 slide.
  - (3) Describe the architecture you used:
    - one slide for front end,
    - one slide for back end,
    - one slide about the database
    - one to three slides for special technology or techniques,
    - one slide on what you learned positive,

  - one slide on what you learned negative.
- (4) You must demo your application.
- (5) Questions.
- Diagrams are often better than text in this type of presentation.
- Email me if you will be using my laptop for your presentation. Make sure your laptop works with the projector we have in class before you come to class.

Step 3: Your project

- In order to give you freedom but to also allow me to control the direction and work level of the project, we will be using a point system. Your project will be assigned a minimum number of points based on the number of people in your team. You will "spend" these points on features and technologies your website application will support. These points are a minimum, so you are permitted to spend more than you have, but you are not permitted to spend less.
- Each team member must spend 4 points. For example: if your team has 3 students then your project must spend at least 12 points. Since you will be dividing the project into distinct units I will grade each student based on the quality of their 4 points of work.
  - CLIENT SIDE
    - HTML5/CSS .. .. 2 points together
    - JavaScript/DOM .. .. 2 points together
    - JavaApplets .. .. 1 point
    - React/Angular .. .. 2 points each
    - Canvas.. .. .. 1 point
  - COMMUNICATION TECHNIQUE
    - JSON/XML/CGI .. .. 1 point each
    - socket programming .. .. 3 points
    - Security (server side, packet encryption) .. .. 2 points each
  - SERVER SIDE
    - Localhost (XAMPP, MEAN, DJANGO) .. .. 2 points each
    - AWS (XAMPP, MEAN, DJANGO) .. .. 3 points each
    - PHP .. .. 1 point
    - Java Servlets .. .. 1 point
    - Python/Perl/C/Bash .. .. 1 point each
  - DATABASE
    - SQL .. .. 2 points
    - noSQL .. .. 2 points
  - ARCHITECTURES & FRAMEWORKS
    - PUSH .. .. 2 points
    - PULL .. .. 2 points
    - SLIM (or similar) .. .. 2 points
    - Bootstrap (or similar) .. .. 1 point
    - Mobile (Android or iPhone) .. .. 3 points
  - OTHER
    - You may suggest others .. .. ?? points

- Notes:
  - HTML5 means using the version 5 features, or it does not count.
  - To receive the point you must do a "significant" amount of coding in that technology. A significant amount means more than two pages of coding (without comments and indentation) per point (this assumes coding from scratch without help from a code generation program or from libraries). If there is no coding in a technology then doing both the installation AND configuration would count as a significant amount, per point.

Step 4: Submission

- A readme.txt file with:
  - your team member names,
  - the unit of work they developed that equals 4 points, &
  - description of how to run your site
- An HTML file that links directly to your website home page or an easy download of your application
- A ZIP of the back end source and databases/files
- A ZIP of the front end source and databases/files
- **All team members submit the entire project**

Step 5: Demo with the instructor or TA (Google doc tab 3)

- To demo both the running program and the code.

HOW IT WILL BE GRADED

- TOTAL: 100 points

- POINTS:
  - (Pass/Fail) Professor's okay
  - (Pass/Fail) Team of 3 or 4 students
  - (Pass/Fail) 70% of project was coded from scratch
  - (Pass/Fail) Front-end (existence of)
  - (Pass/Fail) Back-end (existence of)
  - (Pass/Fail) Database or equivalent (existence of)
  - +10 points for a fully running website (partial running looses these 10 points)
  - +7 points per project point (assumes 3 members in a team)
    - Seven full points if the technology was used correctly and not in a trivial way.
    - Teams with a different number of members will be scaled accordingly
  - +6 points for additional creative work
    (special features, special technology, or something done especially well)

- REDUCTIONS:
  - -10 points for not following instructions

- Points are awarded proportionally