

CSFS 1000 - Individual Project Specifications

Introduction

The purpose of this project is to include all the components of Full Stack Development into one single project. This project will evolve during each course and will be included as one of the grading components. The students will build upon the deliverable of previous course to deliver the next phase of the project.

The end result of the project is a personal website with many dynamic components.

The Goal

The goal of the project is multifold:

1. It would provide students to work on their own personal website and develop the website over the period of the certification.
2. It would allow students to implement the learnings directly on a project which can be leveraged as personal portfolio in the end.
3. The employers would be able to see the work done first-hand through this project.
4. It will build up the overall skillset of the students.

The Project

The project is primarily divided into following components which also resonate with the courses of the Full Stack Certification.

- 1) Wireframing and Basic Design – This phase includes wireframing and basic design of the website. Students will work on designing the wireframes and layout of the website using the skills they acquired from FS 1000 (Foundations of Full-Stack Web Development) course.
- 2) NodeJS backend development – FS 1020 (Server-Side Programming and Tools) provides the necessary toolkit to integrate a backend with the basic UI students built in course 1. This will allow students to understand the overall integration and more advance JavaScript.
- 3) Refining frontend with React JS – Students would be able to convert the basic UI into more complex component-based UI using ExpressJS/ReactJS library and learnings from FS 1010 (Web UI Concepts and Frameworks).
- 4) Database integration – Using the learnings from FS 1030 (Database Design and Principles) students would be able to design, create and integrate MySQL database with their website.

- 5) Cloud deployment – Finally, the website would be deployed on student's own personal domain name hosted on a cloud environment using the learnings from FS 1040 (DevOps and Deployment).

Functional Requirements

The personal website should have but not limited to:

- 1) Home Page - Home page contains a brief introduction about the student.
- 2) Resume Page - Resume page contains resume style education and work experience.
- 3) Portfolio Page – Portfolio page contains links to all the projects that have been executed during the certification program.
- 4) Contact Page – Contact page contains a form which when filled stores the data in the database as well as email the form to the student.

The students are encouraged to be as creative as they want.

Deliverables

During/After FS 1000 (Foundations of Full-Stack Web Development):

- Website wireframes
- Website pages in basic HTML5/CSS
- Basic JS validation on form

During/After FS 1020 (Server-Side Programming and Tools):

- NodeJS backend to serve the UI
- REST APIs to connect to flat JSON data
- Dynamic data on the portfolio and resume pages.

During/After FS 1010 (Web UI Concepts and Frameworks):

- ExpressJS/ReactJS UI for the pages
- Integration with the REST APIs
- Dynamic data on the portfolio and resume pages.

During/After FS 1030 (Database Design and Principles):

- MySQL DB schema creation
- Updating the REST APIs to fetch from MySQL
- Dynamic data on the portfolio and resume pages.

During/After FS 1040 (DevOps and Deployment):

- Deployment of database and web pages on cloud
- Mapping domain name with cloud account.