CMPE 273 – Enterprise Distributed Systems

Programming Homework: JavaScript, HTML5,AWS Refresher Assignment

Due Date: 11th September 2019

This assignment covers basics of JavaScript, HTML5 to serve as a refresher for this course. This is assignment is graded for **25 points** and is an individual effort (e.g.: No teamwork allowed)

Do not use google to search for the problems and copying other's work (including web site) is not allowed

You have to come up with one programming question for each of the topics mentioned below and use Vscode for JS to solve them.

Screenshots must be provided for the output of the problem, using Vscode. Points will be deducted if output is shown in the browser

Be creative in coming up with the programming questions

Your report must contain the following for each question:
- **Introduction to the topic**
- **Programming Question**
- **Code**
- **Output of Execution (Screenshot)**

Grading Criteria:

JavaScript: 6*2point = 12pts; 2points: every functionality listed should be covered and program should be unique
HTML:2*2points=4pts; 2points: every functionality listed should be covered and program should be unique
Deployment:3*3points=9pts

JavaScript (ES6)

(write everything in strict mode and Make full use of arrow function and Promise, Async-await)
1. Functions (arrow implementation) and use Split, Slice, Includes, typeof, stringify, parse in the program.
2. Destructuring object and array , spread and rest operator, closure
3. Use of import and export and static method using Regular Expressions and Default Params
4. Object and Classes with Object.assign demonstrating inheritance using sub-classes in JavaScript along with Method overriding
5. fetch() (Use any open-source API for fetching data)
6. demonstrate difference between:
    - call, apply, bind
    - var, let, const
    - callbacks ,promises, async and await

HTML5:

1. Local Storage and Session Storage using different input types (make use of different input property options in HTML5 like patterns, autofocus, required, email etc. Place types you want, mention the properties used in your Introduction to Topic section)
2. Geolocation and Events

DEPLOYMENT:

1. Build a new application using the above programs that you developed. (For Ex: login, blog, to-do list)

2. Docker:

Create a docker image and run the application in docker.

3. AWS ECS:

Create a service (only one task) running the above application as a task in AWS ECS and include the Public IP in the report.

Submissions must be one Canvas with one MS Word file as submission with screenshots. Do not wait until the last minute on the due date, as canvas servers lag or delays may result in late submissions.