Assessment Brief

CA1 – Building a Chart Classes in JavaScript

Module Name	Lecturer Name
Creative Coding II	John Montayne, Sue Reardon, Catherine Noonan

Title of Brief	
CA1 – Building a Chart Classes in Javascript	

Percentage of Overall Grade	80%
Date handed out	16th February 2022
Due date	8th & 9th March 2022
Individual or Group	Individual

Description

The Minimum Intended Module Learning Outcomes are:

1. Identify and describe the role of statistics in the evaluation and classification of data.
2. Demonstrate a range of data visualisation methods, using OOP programming principles and using array methods to filter and manipulate data.
3. Apply the appropriate statistical calculations to a dataset and Implement a visual output to evaluate the data

This assessment will primarily assess the MIMLO 2 & 3. The Project will further develop your programming skills and will give you an opportunity to apply programming theories into a practical visual example. The project will demonstrate Object Oriented programming methods along with the use of data, using object properties and methods, using array methods to filter and map data, and applying advanced scaling and translations. We will be using code to visualise data and apply good programming principles that will allow for scalability.

In the lab sessions we will be demonstrating and explaining a sample bar chart from scratch. This will include demonstrations of importing and sourcing different types of data. You are then required to develop an number of chart options horizontal Bar Chart, Stacked Bar Chart, Line Charts, Area Charts and/or a combination of any, and develop a scalable, well designed JavaScript class with a number of configurable parameters using P5.js as a core library.

Your data can be from any source but your chart should include a number of fields, a title, a small descriptor of the data, Axis Values, Axis title, Colour Values and a reference to your data source. Your submitted code should be appropriately commented and well laid out.

Throughout the module you will be asked to save your current code to your GITHub account so that your progress can be reviewed.

Deliverables

- Completed Class based Bar Chart with configurable user options
- Completed Class Based Horizontal Bar Chart with configurable user options
- Completed Class Based Stacked Bar Chart with configurable user options
- Completed Class Based 100% Stacked Bar Chart and/or Stacked Bar Chart with average line Graph
- An updated GITHub repository demonstrating iterative approach to coding
- A report (500 -1000 word) highlighting and explaining 5 useful programming methods/algorithms/approaches taken with your code.
- *All of these charts could be configured using a customisable GUI*

Resources

A completed class based Bar chart example will the posted in the Teams files section along with Tutorial Videos.

Schedule

Week 1	Coding Labs
Week 2	Coding Labs
Week 3	Project Briefing
Week 4	Final Coding Labs
Week 5	Project Lab Support
Week 6	Final Submission

Marking Scheme

Category	Description	Weighting %
Class Based Bar Chart	Using the in class tutorial develop a class based bar chart. In your sketch have at least 2 bar charts displaying using different data and some different configurable elements	10
Class Based Horizontal Bar Chart	Using the demonstration tutorial adjust and alter your file to produce a horizontal Bar chart. This class should have a different class name and your sketch should demonstrate at least two version of the same class.	15
Class Based Stacked Bar Chart	Developing on from the bar chart calculate how you would draw a stacked bar chart. You can include the ability to show or hide an average line. The stacked chart could be horizontal or vertical and can display 100% values if chosen.	30
Report	Write a report demonstrating 5 interesting code highlights. This could be a p5.js method, a JS method, an algorithm, explaining transformations….	15
GITHub Repository	A GITHub repository needs to be maintained throughout this project demonstrating your iterative approach to coding your charts	10

The remaining 20% for this module will be done with Catherine