Introduction to Programming II: Example final projects

The following project examples the scope and scale of final projects that would score over 50, 60 and 70% in the final project mark scheme.

Bear in mind that if you replicated these projects exactly, you may not get the same mark, as the quality and complexity of the coding are being assessed. They represent our expectations for the size and difficulty of a project that could score these grades. An outstanding mark can be achieved with any of the template projects.

A project that scored over 50%

Barry undertook a project using the music visualisation template:

- Barry implemented and improved the ridge plots extension, rotating it, changing the scale and colours.
- He implemented a new extension that displayed the wave pattern in a circular shape.
- He implemented a new extension that displayed a series of overlapping rectangular shapes that changed size depending on the volume of different frequencies in the music.
- He attempted to allow the user to start the microphone and use this to drive the visualisation instead of music playback. However, the implementation didn't work as intended if music playback had already begun.

A project that scored over 60%

Sally undertook a project using the drawing application template:

- Sally implemented the stamp extension, enhancing it with the ability to select from a drop down list of elements.
- She implemented the editable shape extension, enhancing it such that the user can choose between straight lines and curves between the points.
- She implemented small extensions for drawing ellipses and rectangles that could be filled or unfilled.

- Sally created an eraser that can change size.
- She also implemented a simple spirograph tool. The tool draws a spirograph in the centre of the canvas with user controls for changing the size of the spirograph.

A project that scored over 70%

Carrie built upon the data visualisation template:

- Carrie enhanced the tech diversity visualisation to utilise a donut chart with the data displayed in the centre of the image when each segment was hovered over.
- She improved the pay-gap tool by colouring with different intensities of red to show how far the organisation was from the centre of the chart and pay parity.
- She used waffle charts to show the results of a survey on climate change attitudes between university students and the rest of the population.
- She found a dataset of population density by UK county online, Carrie cleaned the data and used in a heat map of the UK. The UK county map was also found online in the SVG format. She also implemented simple zooming and panning controls for the map
- Carrie also found dataset of Internet usage by age and gender. She used it to create a circle diagram. The circles were colour coded and sized relative to the number of user in each group.