Generative Drawing Triptych

Using code to design visual media

#### **Final Submission:** Blackboard. Thursday Jan. 20th 2022| 13:59

**Module:** Introduction to Creative Coding (UFCF8L-30-1)

**Teaching Block 1:** 11th October 2021 – 28th January 2022

(Christmas vacation 20th December 2021 – 9th January 2022)

**Component:** A

**Weighting:** 40%

**Contact Time:** 3 hrs per week

**Reading/Coursework preparation:** 5 hrs per week

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# Assignment Overview

A close up of a necklace

Description automatically generated

(image from Algorithmic Art Youtube channel: https://www.youtube.com/watch?v=Q7YgQFt5onw)

This assignment will test the programming, design and critical thinking skills that you have developed during the Autumn Term. It is a great first individual opportunity to be creative with new technology. Your task is to produce three p5.js sketches, each one should explore a different method of drawing computer graphics.

In order to do this, you will carry out the following activities:

* Activity A - Conduct research into contemporary artists and designers creating digital and web-based artworks using code.
* Activity B - Keep a journal of your progress via Blackboard for 5 weeks – posting the outputs from your finished worksheets 2 - 7 inclusive.
* Activity C - Create three distinct sketches that draw computer graphics, host them on a UWE-based server.
* Activity D - Write a brief design and evaluation report reflecting on your generative drawing work.

## Deliverables

The following is a list of the specific deliverables that must be submitted in order to fulfil the requirements of the brief. You will submit and be assessed **individually** on:

1. Three separate p5.js sketches, hosted on the panel server.
2. The code must be submitted via Blackboard in a **.zip file**.
3. URLs of the sketches’ locations need to be submitted in a **text file**.
4. A weekly research and design journal **filled out on Blackboard**.
5. A two-page design and evaluation report submitted as a **PDF** via Blackboard.

## Marking breakdown

* Generative Drawing Project: 70%
* Journal: 10%
* Design and Evaluation Report: 20%

## Important dates

* Week commencing November 22nd 2021– Journal starts.
* **January 20th 2022 13:59 – Blackboard submission.**

# Detailed Assignment Processes

The following is a detailed description of the specific activities that you must undertake in order to fulfil the requirements of the assignment.

Activity A

Use a variety of sources, including websites, exhibitions and books to find out about contemporary design and creative practice using code to produce work. Work could include website design, graphic design, experiential art and design as well as much more. Examples can be found by starting to look at <http://www.creativeapplications.net/>. This should serve as an inspiration for your work in Activity C.

Activity B

Using the online journaling tool incorporated into Blackboard, keep a weekly account of your progress. This should include both the technical progress you have been making and any salient pieces of research you have found.

Activity C

With the JavaScript library p5.js as your main tool, create three different drawings using code to generate 2D shapes and patterns. These can draw on inspiration from your research in Activity A, but must also demonstrate an understanding of the programming concepts that have been explored throughout semester 1.

These include:

* Variables
* Arithmetic and Assignment Operators
* Functions
* Arrays
* Control Structures (loops etc)
* Conditionals
* Classes

**At least two of the drawings must be static (not animated).** There is no requirement for you to use animation in this particular assignment but the third part of the triptych may be animated if you wish.

A title and short description of each piece should be given in the HTML page that sketch in embedded within. Correct HTML tags should be used for this content.

All three sketches should be aligned to the centre of the page using CSS.

Activity D

Write a short design and evaluation report. This should have two main sections: “Design” and “Evaluation”. The “Design” section should contain the most important parts of the research and inspiration you collated from looking at the different design work in Activity 1. It should also contain a short explanation of the code to demonstrate understanding.

The “Evaluation” section should contain a brief analysis of what you felt was successful and what needs improvement about your three pieces.

# Marking Guidance

A full rubric is provided at the end of this document.

Generative Drawing Project (70%)

* Code quality (35%)

The functionality of your code, implementing all of the programming constructs detailed in the previous section. Higher marks will be given for code that functions without any errors. Please ensure no errors are being displayed in the console.

* Commenting to demonstrate understanding (14%)

Each line should be commented, briefly explaining the functionality to demonstrate understanding.

* Creativity (21%)

Using your research as inspiration, higher marks will be given for those who explore the tools you have been given in ways in which you haven’t been specifically taught. Use your visual ingenuity to create novel design pieces.

Journal (10%)

* 2 Marks per entry over 5 weeks. 1 mark for the journal entry and 1 mark for the final task completed each worksheet (from sessions 2 – 7 inclusive), **provided as a URL on the panel server**. There is no worksheet on Week 5 as that is catch up week.
* It does not have to be a long entry, but a minimum of two paragraphs is required. It may contain what was covered in the lectures, what you have found during your research and any other thoughts you are having relating to the module. You may want to submit an image of the output from the workshop exercise you have just been working on for each entry.
* You can make a journal entry any time in the given week. But the final deadline for each one is as follows:
  + Journal 1 – Sunday 28th November : Final Task Week 2
  + Journal 2 – Sunday 5th December 2021 : Final Task Week 3
  + Journal 3 – Sunday 12th December 2021 : Final Task Week 4
  + Journal 4 – Sunday 19th December 2021 : Final Task Week 6
  + Journal 5 – Sunday 16th January 2022 : : Final Task Week 7

Report (20%)

* Design (10%)
  + Quality of research:

Have a variety of sources been used? Have books, websites and journal articles been read in detail?

* + Demonstration of how research informed design:

How clear is it that the research has directly influenced the three outputs?

* Evaluation (10%)
  + Critical analysis of work created:

Reflect on whether the work was successful and why.

* + Thoughts on how to improve the work:

Outline what you would do to make the work better in the future.

# Submission Details

All work must be submitted by 13:59 on the 20th January 2022 via Blackboard. **The journals are time stamped by Blackboard so must be filled out by the end of each week.**

Ensure that you test your work on multiple machines, screen-sizes and browsers. Links must work and file permissions must be such that the material is available to mark online. Work that is unavailable online cannot be marked.

# Submission format guides:

You must submit a PDFof your report with your name and student number in the filename using the ACM template format/ Springer template which is available on Blackboard. Work not in this format will not be marked.

* Templates available here: <https://goo.gl/bij4BG>

Study Support:

The following links provide detailed information on study skill provision and UWE academic policy. In submitting your final submission for examination you agree that you have read the following guides linked to below:

* Digital Media BSc Learning Policy:
* UWE Study skills: <http://goo.gl/NalwD5>
* UWE Word count policy: <http://goo.gl/Qe8kbg>
* UWE Referencing policy (UWE Harvard): <http://goo.gl/Iu3S3L>
* UWE Plagiarism policy: <http://goo.gl/vAHWOp>
* UWE Academic appeal process: <http://goo.gl/Tf1nv3>

Plagiarism Advice:

The usual university strictures about plagiarism apply to this assignment. It is good practice in academic writing to reference correctly the work of others that you may draw upon for your own. Please help us to clearly distinguish your original efforts by so doing.

If you use code from other sites, the sources must be referenced in your Bibliography. If you use any other site(s) as a source of ideas for your site, you must reference the source.  If you copy code and/or ideas from another student's work, or even if you are helped by another student, you must reference/acknowledge the source.

* UWE Plagiarism policy: <http://goo.gl/vAHWOp>

# References:

<https://p5js.org/>

<http://www.creativeapplications.net/>

# Rubric

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| --- | --- | --- | --- | --- | --- | --- | --- |
| **Deliverable** | **Deliverable Sub-section** | **FAIL: Fails to achieve module outcomes.**  **0-30%** | **FAIL: Marginally fails to achieve module outcomes.**  **30-40%** | **PASS: Achieves module outcomes.**  **40-50%** | **PASS: Achieves module outcomes.**  **50-60%** | **PASS: Achieves module outcomes.**  **60-70%** | **PASS: Achieves and exceeds module outcomes.**  **70-100%** |
| Generative Drawing Triptych (70%) | Quality of Code (35%) | Code is not present or does not function. | Code is present but is not functional. Or functions for some time then crashes. Code is jumbled and messy, not formatted well and very difficult to read. | Code functions with a lot of errors. JavaScript console fills up with errors very quickly. Code is jumbled and messy, not formatted well and very difficult to read. | Code functions with no errors in the JS console. Code is formatted to a satisfactory level, is legible and structured well. | Code functions with no errors in the JS console. Code is formatted to a good level, is legible and structured very well. Goes above and beyond what is specified in the brief on at least one element. | Code functions with no errors in the JS console. Code is formatted to an excellent level, is legible and structured very well. Programming methods that have not been taught in class have been implemented successfully. |
| Commenting  (14%) | No comments. | Very few comments showing a deep lack of understanding. | Very few comments showing limited understanding. | Comments throughout, showing some understanding. | Comments throughout, showing significantly developed understanding. | Comments throughout, showing significantly developed understanding of concepts and methods shown both in class and through independent research. |
| Creativity  (21%) | No code functionality to determine whether creativity has occurred. | Very little code functionality to determine whether creativity has occurred. | Generative drawing only implements basic techniques shown in class. | Generative drawing implements basic and more complex techniques shown in class to create three new pieces. | Generative drawing implements significant use of complex techniques shown in class to create novel and aesthetically rich drawing. Some techniques and inspiration taken from independent study implemented with limited success. | Generative drawing implements significant use of complex techniques shown in class to create novel and aesthetically rich drawing. Techniques and inspiration drawn from independent study implemented successfully. |
| Journal (10%) |  | No journal entries. | Some journal entries. | Some journal entries with very limited detail. | Some journal entries with limited detail and not very much reflection on what has been learned. | Some journal entries with good detail and some reflection on what has been learned. | All journal entries completed with good detail and excellent reflection on what has been learned. |
| Design and Evaluation Report (20%) |  | No report submitted. | Incoherent/unreadable/illegible report submitted. | Very basic design research undertaken. Unclear as to how it relates to the project. Very little evaluation, analysis and reflection is provided. No sources provided. | Some design research undertaken. Basic links have been made relating it to the project. Some effort at evaluation, analysis and reflection is provided. Limited number and range of sources provided. | Good design research undertaken.Very clearly linked to the project. Good effort at evaluation, analysis and reflection is provided. Good number and range of sources provided. | Excellent design research undertaken.Very clearly linked to the project. Deep and insightful evaluation, analysis and reflection is provided. Large number and range of relevant sources provided. |