Creative Audio-Visual Application

Developing creative applications using contemporary techniques

#### **Final Submission:** Blackboard. Thurs. May. 5th 2022

#### At 13:59

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

**Semester 2:** 31st January 2022 – 13th May 2022

(Easter vacation 11th April 2022 – 24th April 2022)

**Component:** B

**Weighting:** 60%

**Contact Time:** 3 hrs per week

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

**Module Teaching email:** dave.meckin@uwe.ac.uk

# Assignment Overview

A picture containing object, pinwheel, colorful

Description automatically generated

(image from bork Doy: https://medium.com/@borkdoy/generative-art-triangles-with-p5-js-f1c9e3f50739)

This assignment is designed so that you can build on the feedback you received from coursework B1 and create an awesome interactive web piece for your portfolio. It will facilitate your independent learning of programming, creative and critical thinking that you have undertaken throughout the Spring Term. Your task is to produce a single cohesive interactive audio-visual piece of work – an artwork/webtoy or a game.

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

* Activity A – Conduct research into contemporary web based interactive art/ games.
* Activity B – Design and program a creative, interactive artwork/webtoy/game with a minimum of two different states, scenes or levels.
* Activity C – Write a design and evaluation report that synthesises research and reflections on practical work.
* Activity D – Create and record a demonstration video, presenting your interactive 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. One web based interactive audio-visual piece of art/design. The website (and thus, the piece) **must be hosted on the panel server**. \*
2. All code must be submitted in the same folder structure as is hosted on the server. It must be submitted as a **.zip file** via Blackboard.
3. A three-page design and evaluation report with URL to your piece submitted as a **PDF** via Blackboard.
4. 2-4 Minute demonstration video presentation. This should be hosted on a video service such as YouTube or Vimeo. Submitted as a **URL** via Blackboard.

## Marking breakdown

* Interactive Audio-visual Project: 70%
* Design and Evaluation Report: 20%
* Demonstration Video Presentation 10%

## Important dates

* **May 5th 2022 at 13:59 – Blackboard submission.**

\*NB – You MUST test your site is accessible and functioning with correct file permissions before submission. The URL MUST be submitted to Blackboard - if your site is not accessible it cannot be marked.

# Deliverable Specifications

## Audio-visual Project

You may choose **one** of the following two options (please discuss with your module tutors which you think would be suitable):

1. A web-based interactive audio-visual artwork with a minimum of two states/scenes.
2. A simple web-based game with a minimum of two levels.

Please be aware, games are generally more complex. The option that you pick will not affect your mark – complexity does not necessarily mean a higher mark. We are focusing not only on code structure but also the creativity on show.

Further Detail on the options:

1. This should be a piece developed around an artistic or design theme. It could be exploring something abstract such as “Simple Harmonic Motion” by Memo Akten (<http://www.memo.tv/simple-harmonic-motion/> ) or something more tangible like an interactive narrative, such as “Solace” by Evan Boehm <http://www.creativeapplications.net/js/solace/> / https://nexusstudios.com/work/solace/). Or what about Tendril’s web toys: <https://tendril.ca/work/web-toys/>
2. The game does not have to be hugely complex, in terms of gameplay and graphics. But it should involve some goal directed activity which involves multiple levels (minimum of two). **Gameplay logic is more complex to program so please discuss with your module tutors if you are unsure about this option.** Examples include: <https://www.youtube.com/watch?v=XHAsp17oyP0> and <https://p5js.org/examples/interaction-snake-game.html>. Or indeed: <https://sub-tropic.itch.io/amoeba-blaster>

Which ever option you choose:

* Your piece must be contained within one p5.js sketch.
* There must be a minimum of two states/scenes/levels. This means **two distinct but thematically related** parts of the piece. This could mean combinations of changing colour schemes; difficulty level; interaction mechanics; animation style or other methods.
* You may use standard **and/or** alternative methods of interaction. Standard in this context means keyboard and mouse. Alternative in this context means camera or microphone.
* Your piece **must** contain some reactive sonic element. This may just be simple sound effects related to clicks, or may be something more complex such as being based on collision.

## Code Submission in .zip

You must submit exactly the same code in exactly the same folder structure as is running on the panel server. This should be zipped up and submitted via Blackboard. We ask you to do this so that we can look through your code in a code editor where it is easier to read.

## Report

Write a 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 A. 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 work.

You need to ensure that your report contains references to artistic/design work that has inspired you. You also **must** reference any code snippets you have taken from elsewhere.

## Video

The video is a chance for you to show your piece in action. We ask you to this to ensure that you have done the work and can explain it in your own words. You do not have to show your face, it can just be a screen recording with you talking during the demonstration. Think about what you need to show the markers to demonstrate your understanding of the creative and technical elements of your work.

You are not expected to do any editing in the video itself, it can be a single take. But do make sure you rehearse and that it is no longer than 4 minutes.

# Marking Guidance

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

Creative Audio-visual Application (70%)

* Code quality (35%)

The functionality of your code, implementing all of the programming constructs taught on the module. 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 and sonic ingenuity to create a novel interactive piece.

Report (20%)

* Design (5%)
  + 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 outputs?

* Evaluation (15%)
  + 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.

Video (10%)

* Video Demonstration of Understanding:
  + Demonstration of all features of the piece.
  + Clarity of presentation.
  + Quality of linkage between features and sections of code i.e which parts of the code do which parts of the experience.

# Submission Details

All work must be submitted by 13:59 on the 5th May 2022 via Blackboard.

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:

Code must be submitted in the exact same format as to what you have functioning on the server.

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/> p5, your best friend!

<http://p5play.molleindustria.org/> p5 game engine

<https://github.com/bitcraftlab/p5.gui> p5 graphical user interface library

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

# Rubric

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **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%** |
| Interactive Audio Visual Project (80%) | Quality of Code (35%) | Code is not present or does not function. Website is not present or doesn’t 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. Website is on server but doesn’t function. | 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. Website is present but doesn’t function well, layout makes it difficult to interact. Not responsive. | Code functions with no errors in the JS console. Code is formatted to a satisfactory level, is legible and structured well. Website is present and functional, layout is basic. Not responsive. | 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. Website is present, functions well and layout is good. Fully responsive. | 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. Website is present and functions and layout is professional. Fully responsive. |
| 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. Website design and layout is messy and unclear. | Audio-visual animation, and/or game design and interaction only implements basic techniques shown in class. Website design and layout is very basic. | Audio-visual animation, and/or game design and interaction implements basic and more complex techniques shown in class to create the new piece. Website design and layout is satisfactory, showing some clear thematic consistency. | Audio-visual animation, and/or game design and interaction 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. Website design and layout is good, showing some clear thematic consistency and design flair. | Audio-visual animation, and/or game design and interaction 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. Website design and layout is excellent, showing clear thematic consistency and exceptional design flair. |
| 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. |
| Demonstration Video (10%) |  | No video submitted. | Video URL is submitted but cannot be accessed/is not viewable. | Basic demonstration provided. Not clear that much of the creative or technical elements of the piece are understood by the student. | Satisfactory demonstration provided with some good elements. Clarity of understanding is shown in parts, but other sections there are errors or lack of detail. | Comprehensive demonstration provided with most elements shown and explained. Clarity of understanding is shown throughout. | Outstanding demonstration provided with all elements shown and explained with rigor and in an articulate manner. Clarity of understanding is shown throughout explaining where you have gone above and beyond the brief. |