CPT205 – Computer Graphics (2022-23)

Assessment 1 – 2D Modelling Project

Assessment number	**1**
Contribution to overall module assessment	**15%**
Date on which assessment given	**Wednesday, 28 September 2022**
Submission deadline	**Sunday, 6 November 2022**

1. Learning Outcomes for this Assessment

This assessment aims at assessing your understanding of the topics and your knowledge of the theory and methods by applying a range of the techniques / algorithms covered in the lecture and lab sessions. It will assess learning outcomes B, C and D stated in the module spec through practical work in the 2D space.

2. The Task

You are required to create a 2-dimensional New Year's Greeting Card, which could contain balloons, flowers, trees, candles, cakes, smiling faces, greeting messages and other objects that may appear in a physical New Year's Greeting Card. It should consist of a background and both still and animated objects where appropriate. Keyboard and mouse functions can be used to trigger the actions or display your Greeting Card in stages. An objective of the assignment is to make good use of the graphics techniques and OpenGL functions. In particular, you should consider the following in completing this assignment:

- Proper configuration and use of the MS VC++ and OpenGL environments as for the lab work (i.e. an environment to use the freeglut library),
- Good visual effect of your Greeting Card utilising the full range of the techniques covered to date in the module (e.g. creation of geometry, transformations, viewing, animation and interactions via the mouse and keyboard),
- Effective use of relevant OpenGL libraries,
- Good programming practice (e.g. necessary comments and neat format of coding).

3. The Written Report

You are required to produce a Word-processed report of no more than 5 A4 sides that

a) shows basic information – module code and title, your name, ID and degree programme on the first page;
b) briefly describe the design and lists the features of your Greeting Card (relating to graphics techniques used but not explaining your code in detail);
c) provides a brief instruction section about how your program can be run effectively (e.g. interactive commands with the mouse and keyboard);
d) contains a set of typical screenshots to show your program in action.

4. Submission of Work

a) You are required to compress your **written report, source code (.cpp), and executable (.exe)** (not the whole solution/project which can have a very large file size) into **a single zip/rar** file. Name your zip/rar file in the following way: YourID_Surnamae_GivenName (e.g. **1409876_Yue_Yong**).

b) You are then required to submit your zip/rar file on the Learning Mall module site, by **Sunday, 6 November 2022**.

Late submission will receive penalty in the marking in accordance with the University Code of Practice on Assessment. For each working day after the deadline, 5 marks (out of 100) will be deducted for up to 5 working days. However, the mark will not be reduced below the pass mark for the assessment. Work

assessed below the pass mark will not be penalised for late submission of up to five days. Work received more than 5 working days after the deadline will receive a mark of 0.

5. Backup and Plagiarism and Collusion

As good practice, you should always make sure that your work is properly **backed up**.

This assignment is **individual work**. **Plagiarism** (e.g. misrepresenting another's work or concept without proper acknowledgement and citation of the sources) and **collusion** (unauthorised collaboration or co-operation with others in preparation and production of assessment work) are serious academic offences. Academic offences will be dealt with in accordance with the University Code of Practice on Assessment.

6. Guide to Marking

Students may be required to attend an interview to explain their work if deemed necessary for effective assessment of their submission.

In the following table, each category builds on the requirements contained in the preceding category for assessment.

Category	Requirement
First Class (≥70%)	Overall outstanding work. Very neat program implements effectively all the graphics techniques covered to date. Greeting Card produced with realistic / real-life content and visual effect. Well-structured and concisely written report providing all the required information.
Second Upper (60 to 69%)	Comprehensive program that utilises effectively the full range of the graphics techniques covered to date. Good commenting and layout of the program. An impressive Greeting Card produced with a good range of features achieved by calling appropriate OpenGL functions. A comprehensive and clear report containing all required information within the page limit.
Second Lower (50 to 59%)	Substantial working program implements a good range of graphics techniques (amongst geometry, transformations, interactions and animation). Nice layout and objects in the Greeting Card. Written report contains all the information of the features and functions of the program including some screenshots.
Third (40 to 49%)	Working program that generates a recognisable Greeting Card with some objects and a limited range of the graphics techniques utilised. Written report describes all the basic information for the work completed and provides a good overview.
Fail (0 to 39%)	Some code produced attempting to the use of some graphics techniques covered in the module. No or very limited artefact produced. Written report covers very limited number of the items required in the assignment brief, acknowledging properly sources used if any.
Non-submission	A mark of 0 will be awarded.