IS F311
Computer Graphics
BITS Pilani, Hyderabad Campus
Assignment -1
Due Date : 21st September 2023 (by Midnight)
Total Marks: 7 (weightage : 7%)

Exercise 1: Implement Midpoint Line Drawing algorithm for line with any slope in openGL. [1]
Exercise 2: Implement Midpoint Circle Drawing algorithm using openGL. [1]
Exercise 3: **[5]**

The assignment objective is to read and implement the following text on natural object drawing.

Title: Plants, fractals, and formal languages,
Author: Alvy Ray Smith, Computer Graphics Project, Computer Division, Lucasfilm Ltd.
Proceeding: SIGGRAPH '84 Proceedings of the 11th annual conference on Computer graphics and interactive techniques

- Read and understand the paper. Implement the section that talks about Lindenmayer systems.
- The assignment has to be coded completely in C/C++ and OpenGL.
- The lines and circles have to be drawn using the codes in exercise 1 and 2 above.
- Make the classes and headers properly.
- Develop HTML pages to document the results produced by your code, issues in coding, general discussion on the algorithm, timing analysis, references, and any other remarks.
- Work towards producing aesthetically pleasing outputs. Credits will be given for creative outputs.

Here is a nice video produced by the TA for this course Mr. Tushar Chenan.
https://drive.google.com/file/d/1Hsjd0X9QA6ss7jaCJp1PqJZdo9AuyD4Y/view?usp=drive_link

General Instructions:

1. This assignment can be done in groups of no more than three students.
2. **Each group must provide the details of their group in this excel sheet by assigning their group an ID starting from A, B, C, ….**

   https://docs.google.com/spreadsheets/d/11lkJ5Dpqf6rekLL8pD1DJ_xlg7BKDVJwrtn2VIQyu4I/edit?usp=sharing
3. The code should be well indented, well commented and easily readable. Points will be deducted for an unorganized and uncommented code.
4. You need to upload your working code, and HTML documentation in zip file on CMS by the deadline.
5. The name of the file should be id1_CG_A1.zip, where id1 refers to the ID of only one member of the group.

6. You can discuss with your friends but refrain from copying the code and submitting. Copied codes will receive no credits for the entire assignment.
7. You have to demo the code to the instructor on a scheduled date and timing after submission. Absence during demo would mean no marks.