



CSE423: Computer Graphics

Fall 2021

Lab Assignment 1

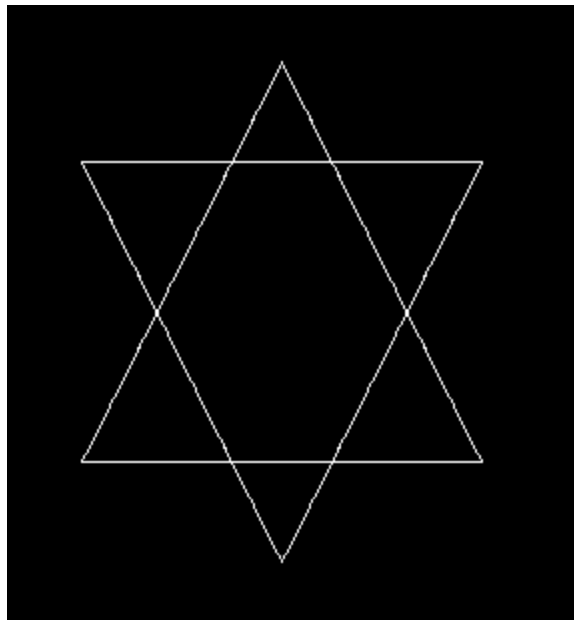
Important Instructions for the Assignment:

- For this assignment, you can choose either **Java** or **Python** environments.
- Before starting this assignment, please make sure you have installed the mentioned **OpenGL libraries** in your Java or Python System.
- The skeleton code will be provided. You can use that for completing the tasks or design your own.
- The submission link is will be provided by your lab faculties. Please follow the submission instructions carefully. Failure to follow, will be subject to 20% to 50% marks penalty.
- The deadline for submission is to be strictly maintained. Late submission will be subject to marks deduction.
- Any form of plagiarism will automatically cancel your assignment. Please refrain from such activities.

Assignment Deadline: 11th November (Thursday) 11.59 pm.

Task 1: Star Drawing (10 points)

You are to draw a **Star** using the base primitives: points, lines, or triangles. You can use **GL_POINTS**, **GL_LINES** or **GL_TRIANGLES** for designing this star. A diagram has been provided as an example. You can modify the design according to your preference. Try to be creative!



Task 2: Letter drawing using Digital Differential Analyzer (DDA) Line Drawing Algorithm(10 points)

Depending on the **last digit of Brac University Student Id**, the output of this task will be determined. If the last digit is an **odd number**, then the output would be F. If the last digit is an **even number**, then the output would be E. You can consider 0 as an even number.

Special Instructions:

- You are to have **at least one dashed line** while designing the desired output. The other lines can be straight lines. An example has been attached for your better understanding.
- For designing the dashed line, you can give some pixel gaps.
- You cannot use ***GL_POINTS***, ***GL_LINES*** or ***GL_TRIANGLES***.

Sample Example 1:

Student Id: 20311212

Output:



The last digit of 20311212 is **2**, which is an **even** number and thus your output will be **E**. Notice the middle line is dashed. You can have either one of the lines as dashed or both.

Sample Example 2:

Student Id: 15101111

Output:



As the last digit of 15101111 is **odd**, so the output will be **F**. Again, you can have any amount of dashed lines, but a minimum of one is mandatory.