FLAME UNIVERSITY

EVERLASTING *learning*

FUNDAMENTALS OF COMPUTER GRAPHICS (CSIT304)

LOGISTICS

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OPENGL PROJECT IDEAS

TENTATIVE PROJECT IDEAS (1)

- Design a simple analog clock using OpenGL.
  - Practice drawing circles, lines, and handling rotations to represent the time.
- Create a basic model of the solar system with the sun and planets.
  - Learn about hierarchical transformations to simulate planet orbits.
- Generate a simple maze and implement an algorithm to solve it.
  - Visualize the maze-solving process using OpenGL.
- Design an Algorithm to draw concave polygon
  - Use the idea of convex polygon and extend it

TENTATIVE PROJECT IDEAS (2)

- Extension of Sutherland-Hodgeman Algorithm for concave polygons
  - Handling isolated polygons as discussed in the class
- Create a kaleidoscope effect by reflecting and rotating objects in a symmetric pattern.
  - Explore the use of transformations to achieve the effect.
- Simulate curves and surface viewer
  - Use the concepts discussed in the class and create an interactive viewer
- Create a simulator for demonstrating any algorithm discussed in the class
  - Make them generalized and interactive as much as possible

TENTATIVE PROJECT IDEAS (3)

- Simulate lighting effect similar to the one discussed in the class
  - Waving of national flag/ circular rotating light pattern
- Using PyGame develop an interactive game
  - Some variant of the examples shared in LMS
- Whirlpool of Colors
- Sierpinski Gasket in Tetrahedron
- Liang- Barsky Parametric Line Clipping

EVALUATIONS AND DEADLINES

GRADING/ EVALUATION PLAN

Sl. No	Component	Assessment Type	Weightage
1	Quiz (Best 3 out of 4)	Continuous	30
2	Assignment/ Project (Individual)		
a	OpenGL	Comprehensive	10
b	Blender	Comprehensive	10
c	Presentation	Comprehensive	5
d	Report	Comprehensive	5
4	Classwork	Continuous	20
5	Homework	Continuous	10
6	Viva	Comprehensive	10
		Total	**100**

IMPORTANT DATES

Date	Purpose	Date	Purpose
~~30 January~~	~~Quiz 1~~	~~31 March~~ **17** April	OpenGL Project Submission
~~22 February~~	~~Quiz 2~~	~~21~~ **17** April	Blender Project Submission
~~26, 28 February~~	~~DIP (No Class)~~	~~23~~ **18**April – ~~25~~ **23** April	PROJECT DEMO, VIVA
28 March	Quiz 3	~~4 May~~ **30 April**	Updated/ Final Submission
~~18~~ **13 April (Sat)**	Quiz 4		

IMPORTANT DATES

- Classwork days
  - 19 March (Blender)
  - 28 March (Calculation/ OpenGL)
  - 16 April (Calculation/ OpenGL)
- Homework deadline
  - 31 March (Prof. Sarah's lecture summary)

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THANK YOU