

Indian Institute of Information Technology, Allahabad

Object Oriented Methodology

Course Instructors: Prof. O.P. Vyas, Dr. Ranjana Vyas

SOFTWARE DRAWING CUBE AND ROTATION

GROUP MEMBERS –

- *Aayush Singh Prajapati (IFI2022016)*
 - *Akash Barwar (IFI2022008)*
- *Saatvik Dubey (IIB20220)*

Class Responsibilities and Collaborators (CRC) Diagram

Main	
Description – Acts as the starting point of the software and creates all the other classes and objects.	
Responsibilities – Creation of dialogue box. Creation of frame. Implementing z buffer Mouselistner for rotations. Initiating respective panel. Adding panels to frame.	Collaborators – Dialogue ZBuffer Object3D Point3D Polygon3D Solid

Dialogue	
Description – Prompts the user to enter their name, and choice of frames.	
Responsibilities – Takes user name. Validates user name. Prompts user to select Frame i.e. Wireframe or solid.	Collaborators – Main Solid

Solid	
Description – Provides choices of frames(solid or wire) for user to select from.	
Responsibilities – Lets user see available frames to choose from.	Collaborators – Dialogue Main

ZBuffer	
Description – Implements the removal of sides which are not in the viewframe.	
Responsibilities – testAndSet() method checks if a given depth is less than the stored depth in the buffer and updates it if so.	Collaborators – Main

Object3D	
Description – Represents the cube.	
Responsibilities – Initialisation of 3D cube.Painting shapes on the panel.	Collaborators – Point3D Polygon3D Main

Point3D	
Description – Contains corner coordinates.	
Responsibilities – Takes 3 values x,y,z (cube corner coordinates)	Collaborators – Object3D Main

Polygon3D	
Description – Contains	
Responsibilities – Takes corner points of square. Takes color for side of cube (square).	Collaborators – Object3D Main

