

**Indian Institute of Information Technology, Allahabad**  
**Object Oriented Methodology (OOM)**  
**Mini Project-3**

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OOM Mini Project # 03: [Development of 3D computer animations through Matrix Operations.](#)

**Abstract**

The following program demonstrates how the basic 3D transformations can be programmed in Java to show the movements of a 3D object. When the applet starts, a 2D cube appears on the screen. When we press the drag mouse then cube performs rotations in the direction in which the mouse was dragged and thus, we can see the 2D rendered image of the cube. A z buffer is used to delete hidden faces. "Double buffering" is used for smooth animation. The present program has the feature of developing the required 3D model in either wireframe or as solid shape. Also, the present program uses classes namely Object3d, Polygon3D, Point3D.

**Specific Technology**

Java, Swing, JSF, XML

**Project Tasks**

Use case analysis, Design, Implementation, and User Interface.

**Submission**

The project presentation has to be done by each member to show periodically the progress and the complete project submission should contain the following:

UML diagrams:- Use Case diagram, Class diagram, CRC diagram(s), illustrating the design of your program.

All the Java source code is necessary to compile, execute and demonstrate.