### **University of Petroleum and Energy Studies**

## School of Computer Science Department of Cybernetics



# Graphics & Animation Tools Project Report

(Session: 2020-2021)

Course: B. Tech with Specialization in Open Source and Open Standards

Batch: 2017-2021

Semester: VII<sup>th</sup>

#### **Submitted To:**

Dr.Durgansh Sharma Assistant Professor Department of Cybernetics

#### **Submitted By:**

Aditya Malik R100217003 500061968

#### Aim:Design of 3D gun model.

#### **Steps followed:**

- 1. Open Blender.
- 2. Clear the default interface of the blender by deleting or hiding the cube.
- 3. After emptying the screen, go to view and click background image, load, then choose a picture of the weapon you want
- 4. Go to top view and add a square, then delete two of the vertices and place one of the remaining on a point on the picture, and the other out of the way.
- 5. Select both vertices and subdivide.
- 6. Move the generated point to the next good-looking spot on the picture
- 7. With that selected still, select the outside vertex also, and subdivide.
- 8. Continue until you are on your third to last one, then select your outside vertex and move it where you would move the next vertex.
- 9. Select the first and last vertices and go to mesh>>make edge/face
- 10. Extrude to half your preferred thickness, then extrude the rest of the way.
- 11. Select the center vertices on the blade, and scale up.
- 12. Then move vertices to your liking.
- 13. Select the vertices of the handle, go to mesh>>vertices>>separate.
- 14. Add a modifier, choose subSurf, turn up the level until it looks close to what you want without too many vertices. Click apply next to the modifier.
- 15. Modify vertices (using proportional edit helps) to your liking.
- 16. Go to object mode, and turn off double-sided on any meshes that are.
- 17. If black appears on any parts of the mesh, highlight it, go to edit mode, select all vertices, go to mesh>>normals>>recalculate outside.
- 18. If there is still black, select those faces and go to mesh>>normals>>flip.
- 19. If there is still black, then you are missing a piece of mesh. Highlight the vertices around the hole, go to mesh>>vertices>>fill.
- 20. If black did not appear, then select everything (in object mode) and go to object>>join objects and say yes.



