

## Introduction to Blender

Blender is a free and open-source 3D computer graphics software tool set.

It supports various 3D pipeline tasks such as

modelling, animation, simulation, rendering, video editing, game creation, etc.

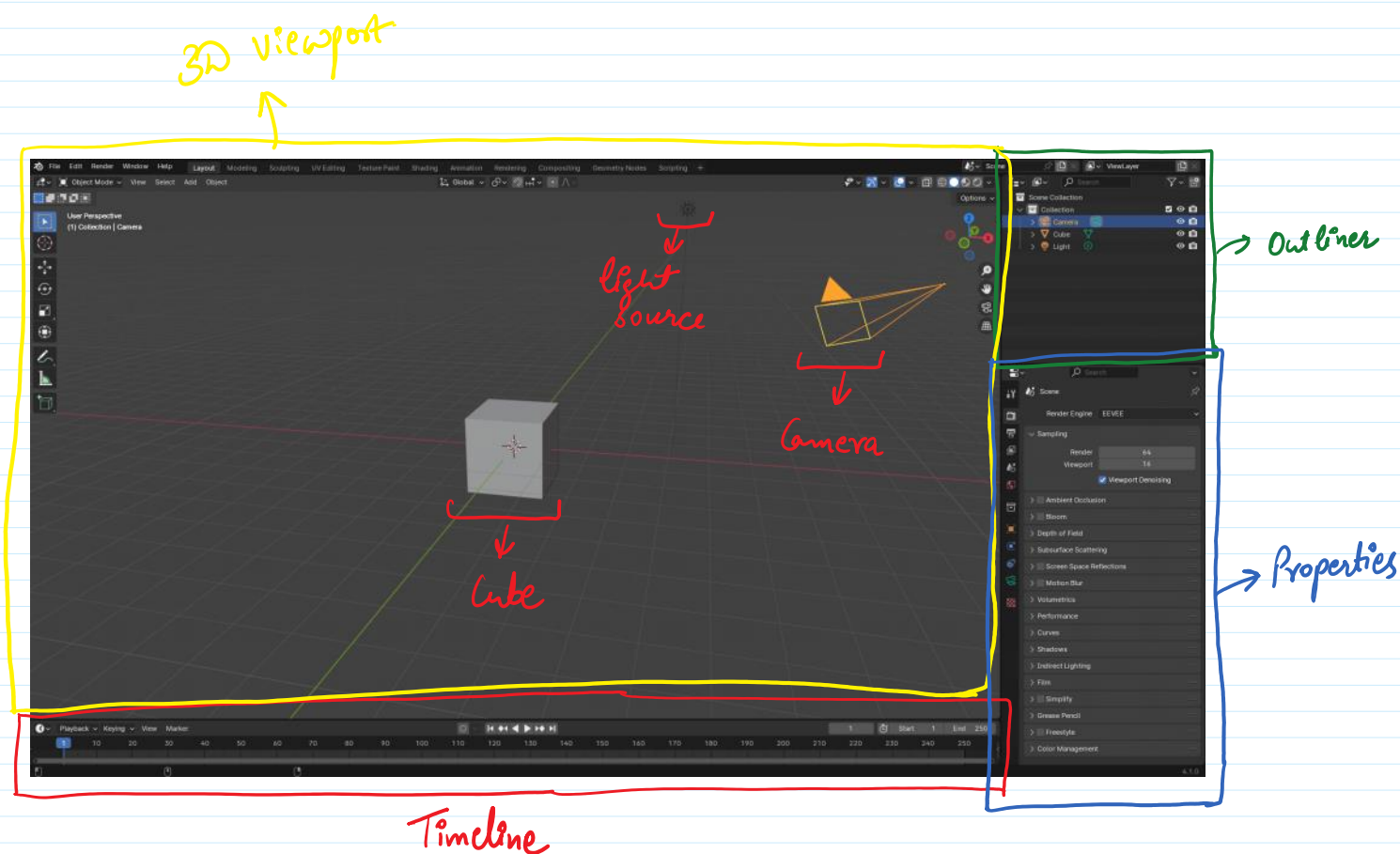
### ①. Download and install blender from:-

<https://www.blender.org/features/>

### Detailed documentation :-

[https://docs.blender.org/manual/en/latest/interface/window\\_system/workspaces.html#default-workspaces](https://docs.blender.org/manual/en/latest/interface/window_system/workspaces.html#default-workspaces)

After installation, you should see a default scene with a cube, a light and a camera. As can be seen in the screenshot below:-



The default workspace of blender has the following

components :-

1. 3D viewport

2. Outline

3. Properties Editor

4. Timeline

② Set up your Editor and learn to render and save image as also explained in detail in the following document.

③ The graphics data are commonly stored in the form of obj format

<https://web.stanford.edu/class/cs148/lws/cs148-hw1.pdf>

<https://groups.csail.mit.edu/graphics/classes/6.837/F03/models/teddy.obj>

Save this teddy.obj in your blender folder and open it in the edit mode.

Notice the file structure,

vertices  $\left\{ \begin{array}{l} v \quad x_1 \quad y_1 \quad z_1 \\ v \quad x_2 \quad y_2 \quad z_2 \\ \vdots \\ v \quad x_n \quad y_n \quad z_n \end{array} \right.$

triangular faces  $\left\{ \begin{array}{l} f \quad \text{face0v1} \quad \text{face0v2} \quad \text{face0v3} \\ \vdots \\ f \quad \text{face0vi} \quad \dots \quad \dots \end{array} \right.$

TASK :-

Today's task is Sculpting

Sculpting is shaping / carving a 3D object.

For a start, you can learn creating flowers from the video link below:

[Creating Beautiful Flowers with Geometry Nodes in Blender](#)



After learning basics of sculpting,  
Try to make an object of your choice.