## Algorithm for 2D Rotation of an object.

Consider a point object O has to be rotated from one angle to another in a 2D plane.

Let-

- Initial coordinates of the object O = (Xold, Yold)
- Initial angle of the object O with respect to origin = Φ
- Rotation angle = θ
- New coordinates of the object O after rotation = (Xnew, Ynew)

This rotation is achieved by using the following rotation equations-

- Xnew = Xold x cosθ – Yold x sinθ
- Ynew = Xold x sinθ + Yold x cosθ