Assignment 6: Geometric Image Transformations

- Q1. **Translation**: There is one attached image "moon.jpg", identify moon and translate it in x and y directions, where $t_x = 200$ and $t_y = 175$. Add the offset values so that a part of moon does not go outside current image boundary.
- Q2. **Rotation:** Take any image of your choice and rotate it around its center by an angle of 120 degrees:
 - a. In steps of 15 degrees increment
 - b. Directly by 120 degrees

The transformation for rotation by angle *t* around point (xc, yc) is

$$x' = (x - xc) \cos t - (y - yc) \sin t + xc$$

$$y' = (x - xc) \sin t + (y - yc) \cos t + yc$$

Write you observation clearly.