```
    plt.ylabel('Y')
    plt.title('Circle Drawing using Bresenham Algorithm')
    plt.gca().set_aspect('equal', adjustable='box')
    plt.grid(True)
    plt.show()


# Define the center and radius of the circle
x_center, y_center = 0, 0
radius = 10


# Get the points for the circle
circle_points = draw_circle_bresenham(x_center, y_center, radius)

# Plot the circle
plot_circle(circle_points)
```


output

pip install matplotlib

Q5. Write a program to perform 2D Translation

```
import matplotlib.pyplot as plt
```

```
angle_degrees = 45

# Get the rotated points
rotated_points = rotate_2d(original_points, angle_degrees)

# Plot the original and rotated points
plot_points(original_points, rotated_points)
```

outputs

pip install matplotlib

Q7. Write a program to perform 2D Scaling

```
import matplotlib.pyplot as plt

def scale_2d(points, sx, sy, origin=(0, 0)):
    origin_x, origin_y = origin
    scaled_points = []
    for (x, y) in points:
        scaled_x = origin_x + sx * (x - origin_x)
        scaled_y = origin_y + sy * (y - origin_y)
        scaled_points.append((scaled_x, scaled_y))
    return scaled_points
```