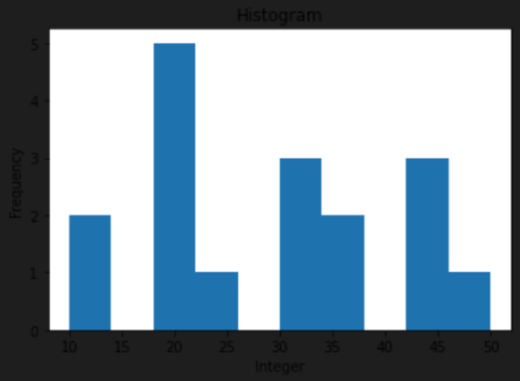
Name - Khushi Chhatwani
College Roll no.- CSC/21/55
University Roll no. - 21059570021

8. Create various types of plots/charts like histograms, plots based on sine/cosine function based on data from a matrix. Further label different axes in a plot and data in a plot.

```
import numpy as np
import matplotlib.pyplot as plt

# Histogram
list = np.array([20, 45, 45, 35, 30, 10, 30, 20, 20, 50, 30, 20, 20, 10, 45, 25, 35])
plt.hist(list)
plt.xlabel('Integer')
plt.ylabel('Frequency')
plt.title('Histogram')
plt.show()
```

[50]




```
import math

# Sine curve
degrees = range(0 , 720)
sinValues = [math.sin(math.radians(i)) for i in degrees]
plt.plot(sinValues)
plt.xlabel('Degrees')
plt.ylabel('Sin Values')
plt.title('Sine Curve')
plt.grid()
```

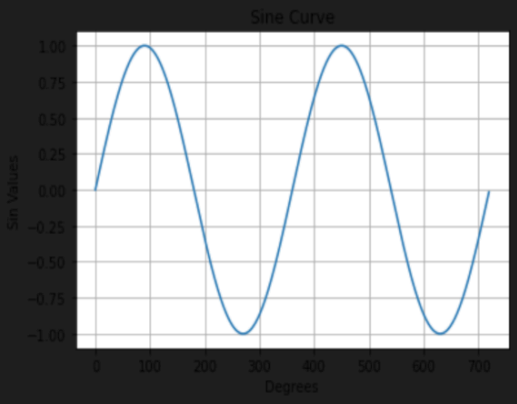
Restricted Mode ⊗ 0 ⚠ 0 0

Name - Khushi Chhatwani
College Roll no.- CSC/21/55
University Roll no. - 21059570021

```
import math

# Sine curve
degrees = range(0 , 720)
sinValues = [math.sin(math.radians(i)) for i in degrees]
plt.plot(sinValues)
plt.xlabel('Degrees')
plt.ylabel('Sin Values')
plt.title('Sine Curve')
plt.grid()
plt.show()
```

[51]



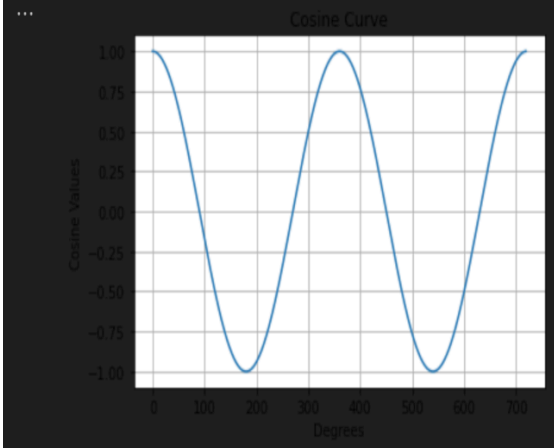

```
# Cosine curve
degrees = range(0 , 720)
sinValues = [math.cos(math.radians(i)) for i in degrees]
plt.plot(sinValues)
plt.xlabel('Degrees')
plt.ylabel('Cosine Values')
plt.title('Cosine Curve')
plt.grid()
plt.show()
```

[52]

Name - Khushi Chhatwani
College Roll no.- CSC/21/55
University Roll no. - 21059570021

```
# Cosine curve
degrees = range(0 , 720)
sinValues = [math.cos(math.radians(i)) for i in degrees]
plt.plot(sinValues)
plt.xlabel('Degrees')
plt.ylabel('Cosine Values')
plt.title('Cosine Curve')
plt.grid()
plt.show()
```

[52]



Name - Khushi Chhatwani
College Roll no.- CSC/21/55
University Roll no. - 21059570021