1st **wap to use matplotlib and plot the graph**

import pandas as pd

df = pd.read\_excel("C:/Users/pdwiv/OneDrive/Desktop/excel-comp-data.xlsx")

df.head()

df["total"] = df["Jan"] + df["Feb"] + df["Mar"]

df.head()

import matplotlib.pyplot as plt

df['total'].plot(kind="hist")

plt.xlabel("X axis label")

plt.ylabel("Y axis label")

plt.title("Histogram Plot")

plt.show()

df['total'].plot()

plt.show()

category\_data = df["account"]

total\_data = df["total"]

plt.pie(total\_data, labels=category\_data, autopct='%1.1f%%')

plt.title("% of total sales of each account")

plt.show()

2nd

**Sentiment analysis using nlp**

import nltk

from nltk.sentiment import SentimentIntensityAnalyzer

nltk.download('vader\_lexicon')

texts = ["I love working with Python!",

"The weather is terrible today.",

"This movie is absolutely amazing!",

"I don't like this restaurant at all."]

analyzer = SentimentIntensityAnalyzer()

for text in texts:

sentiment = analyzer.polarity\_scores(text)

print("Text: ", text)

print("Sentiment Score: ", sentiment['compound'])

print("\n")

3rd

**twitter analysis using vadar library**

import pandas as pd

from textblob import TextBlob

data = pd.read\_csv('sample\_data.csv')

for index, row in data.iterrows():

text = row['text']

sentiment = TextBlob(text).sentiment.polarity

print("Text: ", text)

print("Sentiment Score: ", sentiment)

print("\n")

**working on opencv for image processing**

import cv2

img = cv2.imread('image.jpg')

gray\_img = cv2.cvtColor(img, cv2.COLOR\_BGR2GRAY)

cv2.imshow('Grayscale Image', gray\_img)

cv2.waitKey(0)

threshold\_img = cv2.threshold(gray\_img, 127, 255, cv2.THRESH\_BINARY)[1]

cv2.imshow('Thresholded Image', threshold\_img)

cv2.waitKey(0)

contours, hierarchy = cv2.findContours(threshold\_img, cv2.RETR\_TREE,

cv2.CHAIN\_APPROX\_SIMPLE)

cv2.drawContours(img, contours, -1, (0, 255, 0), 3)

cv2.imshow('Image with Contours', img)

cv2.waitKey(0)

cv2.imwrite('image\_with\_contours.jpg', img)

**6th text to speech and speech to text**

import speech\_recognition as sr

import pyttsx3

# Convert speech to text

r = sr.Recognizer()

with sr.Microphone() as source:

print("Say something!")

audio = r.listen(source)

try:

text = r.recognize\_google(audio)

print(f"You said: {text}")

except sr.UnknownValueError:

print("Speech recognition could not understand audio")

except sr.RequestError as e:

print(f"Could not request results from Google Speech Recognition service; {e}")

# Convert text to speech

engine = pyttsx3.init()

engine.say("Hello, how are you?")

engine.runAndWait()