1. Imagine there is a file full of Twitter tweets by various users and you are provided a set of words that indicates racial slurs. Write a program that can indicate the degree of profanity for each sentence in the file. Write in any programming language (preferably in Python) - make any assumptions, but remember to state them.

Instructions:

- First copy the below code and paste it into the Google collab.
- Then connect to google drive and upload the text file(tweets.txt) in google drive.
- Copy the path and paste it into the (with open) named line.
- Finally, run the code.

CODE:

```
import re

# List of racial slurs
racial_slurs = set(['slur1', 'slur2', 'slur3'])  # Add more slurs as needed

# Function to detect profanity in a sentence
def detect_profanity(sentence):
    # Split the sentence into words
    words = sentence.lower().split()
    # Count the number of racial slurs in the sentence
    num_slurs = sum(1 for word in words if word in racial_slurs)
    # Calculate the degree of profanity based on the number of slurs
    if num_slurs == 0:
```

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        return "Not profane"
    elif num_slurs <= 2:
        return "Mildly profane"
    elif num_slurs <= 4:
        return "Moderately profane"
    else:
        return "Highly profane"

# Read the file containing tweets
# Read the file containing tweets
with open('/content/drive/MyDrive/tweets.txt', 'rb') as file:
    tweets = file.read().decode('ISO-8859-1').splitlines()


# Loop through each tweet and detect profanity
for tweet in tweets:
    tweet = tweet.strip()
    profanity_degree = detect_profanity(tweet)
    print(f'Tweet: {tweet}')
    print(f'Profanity Degree: {profanity_degree}')
    print('---')
```