Let $f(x) = x^3-x-1$ be a function. We need to find the solution for $f(x) = 0$ using Secant Method. You need to implement the algorithm using Python programming language in Google Colab. For i-th iteration, you need to report the values of x_{i-1}, $f(x_{i-1})$, x_i, $f(x_i)$, x_{i+1}, approximation error and the relative approximation error. Finally, you need to visualize the approximation errors and relative approximation errors using a bar chart (approximation error vs iteration number and relative approximation error vs iteration number). Assume that, $x_0 = 50$ and $x_1 = 48$.

Now, create a line chart comparing the approximation errors of Newton raphson method ($x_0 = 50$) and secant method. Finally, create another similar line chart for comparing relative approximation errors.

Bar Chart:

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

x = np.array(["A", "B", "C", "D"])
y = np.array([3, 8, 1, 10])

plt.bar(x,y)
plt.show()
```

Google Colab:
https://colab.research.google.com/

You need to submit two files:
(i) the .ipynb file
(ii) the code in a .py file

You MUST follow the following filename format.
(i) roll_number.ipynb
(ii) roll_number.py

Example: 61.ipynb, 61.py