Assignment

Weekly Assignment 9

Lecture Contents: Git Advanced 1

Task Description

You have been given a skeleton code for two functions: **'even_list'** and **'sum_of_squares_of_even'.**

The **'even_list'** function takes a list of integers as input and returns a new list of only the even integers from the input list.

The **'sum_of_squares_of_even'** function takes a list of even integers as input and returns the sum of the squares of all even integers in the list.

Your task is to complete the implementation of these two functions by filling in the code in the **'# TODO'** section for **each function in each branch that have the same name as the function**.

Note that the output of the **even_list** function will be the input of the **sum_of_squares_of_even** function (as you see in the skeleton code). Please take that into account and fill in the code.

Tips & Specifications

1. Create a new repository named **"SWE_2021_41_2024_2_week_10"**

2. Create the following skeleton code in **"main.py"** in the **"main"** branch and commit

3. Create a new branch **"even_list"** from the latest **"main"** branch

   a. In the **"even_list"** branch, fill the skeleton code of function **even_list** and commit

4. Create a new branch **"sum_of_squares_of_even"** from the latest **"main"** branch:

a. In the **"sum_of_squares_of_even"** branch, fill the skeleton code of function **sum_of_squares_of_even** and commit

5. Push all three branches to your GitHub remote-repository

   a. git push origin main

   b. git push origin even_list

   c. git push origin sum_of_squares_of_even

Input Specification

Skeleton code for "**main.py**"

```python
from typing import List

# Skeleton code for even_list
def even_list(int_list: List[int]) -> List[int]:
    """
    Determines if a number is even and return an even list.

    Args:
        int_list: A list of integer.

    Returns:
        A list of even integers.
    """
    # TODO: Implement even_list
    pass

# Skeleton code for sum_of_squares_of_even
def sum_of_squares_of_even(even_int_list: List[int]) -> int:
    """
    Computes the sum of the squares of all even numbers in a

    Args:
        even_int_list: A list of even integers.

    Returns:
        The sum of the squares of all even numbers in the lis
```

```python
    """
    # TODO: Implement sum_of_squares_of_even
    pass

# Main function
def main():
    # Example list
    int_list = [1, 2, 3, 4, 5, 6, 7, 8, 9, 10]
    even_int_list = even_list(int_list)
    output = sum_of_squares_of_even(even_int_list)
    print(output)

# Boilerplate code
if __name__ == "__main__":
    main()
```

Output specification

The output after **"git log --all --graph --oneline"** should be as follow

- The **"even_list"** and "**sum_of_squares_of_even**" branches should not be connected directly to each other

- The **"even_list"** and "**sum_of_squares_of_even**" branches should be branched from the latest commit in the **"main"** branch

(Position of HEAD can be ignored)

Submission & Evaluation

- **Submit your GitHub ID (username) to iCampus.**

- The TA will grade the code by creating a copy of the student's repository at "https://github.com/[YOUR_USERNAME]/SWE_2021_41_2024_2_week_10"

- If TA cannot access the repository at that address or the name of the python script ("main.py") is different, the homework will not be graded.

- The TA will check the time when you committed and pushed lastly. The assignment uploaded after due date will not be graded.

Due date

24/11/06 23:59