

Assignment 1

(from Lab 2) – Google App Engine Python

Task-1

[3 marks]

Make necessary modifications in the code of Lab 2 so that your Guestbook application the **Greeting** data structure also contain a Subject attribute (type String). Your webpage also should contain a new textbox for providing subject which should be stored in DataStore along with author and content.

Rubric

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|--|--------|
| 1. Adding subject to html view | 1 mark |
| 2. Adding and storing subject in DataStore | 1 mark |
| 3. A fully functional working code | 1 mark |

(from Lab 3) – Google App Engine PHP

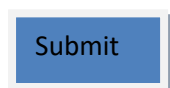
Task-2

[7 marks]

Create a Google app using your knowledge in Google app engine for PHP in Lab 3 which will have following features:

In first step you application will load a page with 1 textbox as follows. In the textbox user can input any number between 5 to 25. Let, we call this number as “n”.

N:



Once user click the submit button it will create a file named “[fibonacci_n.txt](#)” in your Google bucket that prints [first n numbers of Fibonacci series](#) in that file. (e.g. if user inputs 10 then it will create first a file named “[fibonacci_10.txt](#)” in your google bucket with will have first 10 Fibonacci numbers in the format: 1,1,2,3,5,8,13,21,34,55).

You can build Fibonacci numbers using the algorithm described here:

https://www.tutorialspoint.com/data_structures_algorithms/fibonacci_series.htm) . After clicking the submit button, the application will also display a web page with three text-field and a submit button (as follows). Let’s the text fields are labeled as A, B and C. A, B and C will take numerical values (validation check is not required).

A:

B:

C:

After providing input numerical values in A, B, C and clicking submit button it will first calculate the sum of A and B (say this is S). The result of this sum (S) will need to be multiplied by C (say the result is M). Now you need to print the total sum which will be equal to M+all values generated (i.e. first n number of Fibonacci series) in "fibonacci_n.txt" in the same webpage. While calculating the sum, you must read the values from "fibonacci_n.txt" file. Moreover, it will also create a file named "[result.txt](#)" in your Google bucket which will contain the average of (A, B, C + all values in "fibonacci_n.txt") file.

Example

In your "fibonacci_10.txt" you have values: 1,1,2,3,5,8,13,21,34,55. And you provided the following input values in your webpage

A:

B:

C:

So, after clicking submit button the webpage should look like this:

A:

B:

C:

Total Sum: 263

Average: 12.77

Rubric

- | | |
|--|----------|
| 4. Writing code for generating Fibonacci series | 1 mark |
| 5. Creation of "Fibonacci_n.txt" with Fibonacci series | 1 mark |
| 6. Showing the webpages according to the requirement. | 0.5 mark |
| 7. Taking N, A,B,C input: | 0.5 mark |
| 8. Calculating and showing the result | 1 mark |
| 9. Creation of "result.txt" file and calculating average | 1 mark |
| 10. A fully working application, understanding and code explanation: | 2 marks |

(from Lab 3) – Google BigQuery

Task-3

[3 marks]

This task is based on **Google Big Query** that we covered in Lab 3.

Using the baby_names dataset you created in Lab 3 write some queries (using BigQuery browser tool) to identify the following information (Each correct query 1 mark)

1. Find a list of all female babies born after 2008 with frequency count between 7000 and 17000.
2. Find total number of male babies born before 2011 with name starts with 'T'.
3. Find top 20 baby names based on frequency after year 2006.

Think and Answer

Task-4

[2 marks]

Assignment 2 will ask you to work on cloud computing related individual projects. In view to get you started with thinking of what could possibly be done, please, reply to the following questions.

Please, reply to these questions with a short (2 or 3 lines) answer:

- Give a couple of examples of principles/applications which are possible/especially efficient because using cloud-based services?
- What kind of application you would like to work on for the Assignment-1? Provide a short description.

Deadline and Criteria

You must demonstrate your code and work to your tutor during your lab session time (the lab normally you attend). Otherwise you will get 0 in this lab test. You have time to demo your working application and code to your tutor during your lab session between Week 3-6 (or by 24th August). You are encouraged to finish it early, so you can show it early and can focus on your Assignment 2. **You will get 0 if you do not demo it before mid-semester break.**

Plagiarism

Please do it by your own. Don't copy from others. If we can identify that you copied from others you will get 0.

Submission

Create a .txt file and name it [your_student_number].txt (e.g. s3369312.txt). This .txt file will contain items in following order

1. Your Name and student number
2. Code of task 1
3. Code of task-2
4. Queries of task-3
6. Answers of "Think and answer"

Make a .zip of your text file and submit in the Canvas anytime before August 26th, 2018 (end of week 6). You will be marked during your demo time. This submission is only for keeping the records. However, you will not able to view your mark in Blackboard until you submit your file.