Homework 3

CS453 Application Lifecycle Management
Spring 2020

Due: **8 April 2020 23:55**

Please read the required material then answer the following questions. **Examples, when given, should be your own.** Avoid directly quoting from the texts. Use your own sentences. Do **not** make a cover page for your submission. Failing to include name,surname or section is likely to be penalised. Your submission can not be longer than **2 pages**. You should use a sensible font&spacing and submit to Moodle in **PDF** form before the deadline alongside the Python file.

Materials :

- Perceval: Software Project Data at Your Will (including the video link in the paper)

Questions :

Q1) Why would its potential users require a tool like Perceval in order to analyze the software development life-cycle of a project? What are its benefits?

Q2) How would you justify Perceval using only the JSON format for the data that it retrieves? What connections do you observe in the creator's approach to data retrieval that is similar to the integrated approach of Tasktop from your first homework assignment?

Q3) Find a software repository that is backed by an open-source community from GitHub. Your requirements are:

- The repository should be active at least 10 commits in the past 3 months.
- It should be more than 2 years old. (Last commit time- First commit time)
- It should have at least 25 contributors.

You should confirm that you have found a compliant repository by checking these requirements using **Perceval**. You will document the link to the repository and the data that you gathered (time periods and profile names of the contributors on GitHub).

Q4) Find the person with the most commits in this repository, report her profile name and number of commits. Assume each GitHub account is unique and refers to a different developer.

Q5) Find the season (summer for example) with the most number of commits for this repository during the last years. Last year refers to the past 365 days. Report the commit numbers for each season.

Provide your work as a Python script that outputs your data for your answers to questions 3,4 and 5. For clarifications, you can send an email to your TA with a subject starting with "CS453".