DA376C: Additional info for writing your project plan

This information clarifies issues of concern regarding your project work. It is written in Q&A form.

Q: How do we choose my project title?

A: You can think of any real-world internet-based application with reasonable amount of complexity, enough to engage 3-4 people for 8-9 working days full time work.

Q: How do we estimate the complexity?

It is often not easy to quantify complexity because it depends on several factors. The first project review meeting is mainly used to answer this question. You will receive a feedback from the teacher after you upload the project plan.

In order to have a reasonable estimate during the preparation of your project plan, you can take the following factors:

- *How many features or functionalities does my application have?*
- *How much new stuff do I have to learn to implement my project?*
- *How friendly is the development environment I chose?*
- *How intuitive are the services offered by my Cloud provider?*

To estimate the complexity, the teacher uses his experience from already tested on-site labs with a certain number of features that take about 3 hours to complete. (sample cases will be uploaded for you)

Q: How useful are the lectures and the labs for the project?

A: Although the project is a self-guided work, the lectures and the labs are very helpful to get hints on solving some tasks such as security, database access, use of storage services, etc. Students in previous years commented that the skills they developed in solving the labs and tutorials combined with the theoretical knowledge from the lectures opened the way for them.

***Note**: You may have to devote additional time to explore topics that are not covered in the lectures and the labs.*

Q: What are the typical features that my project should contain?

***The following features are in the minimal list of requirements**:*

- *Security: multi-role (administrator/operator/end user/…) access*
- *Backend logic: processing incoming client requests on a cloud-based server (IaaS/PaaS/…)*
- *Web interface UI for log-in/authentication, uploading data, visualising output, etc. The number of pages you have depends on the number of features you have.*
- *Database access (with a Cloud database) as demanded by your application.*

The following features are recommended:

- *Integration of a mobile client (in the form of an app for data collection, and some of the above user requirements)*
- *Cloud storage services such as blobs, tables, etc., (depending on your use case, e.g., you want to upload and share photos/videos/...)*

The following is an example of ***features greatly appreciated for those aiming to achieve high grades***. *It is mostly about integrating Cloud services not taught in the course by learning them on your own:*

- *Machine learning services: e.g.*
  - *face recognition for surveillance or a social media application)*
  - *Natural language processing (speech to text or vice versa)*
- *Container managed applications and microservice architectures*
- *Performance measurement and tuning of your application, Etc.*

Note*: This is only a guide, you may still achieve a high grade by building an application which has a fair dose of complexity and a set of interesting non-trivial (creative) functionalities.*

Q: What if I am unable to complete the project according to the schedule?

A: Given the extra ordinary circumstances we are in, it is possible to have a flexible schedule (within reasonable bounds). The teacher informs you what you should do and when to complete your project. This is however contingent upon the situation on the ground and the University's new directives (if there will be any by then).

Q: When is a project work judged complete and ready for presentation?

A: If you deliver the minimal set of requirements you promised in your project plan satisfactorily, your project work can be presented to the wider public (your class). This includes the ***security, database access****, the* ***front-end*** *and* ***back-end*** *features discussed earlier.*

Q: How are the final grades decided?

A: If your project is recognized as complete, all you need to get a pass grade (3) is to make the final presentation (oral) and submit your report and code.

The guidelines on how to finalize your project (how to do the presentation and write the report) will be given later.

If you deliver a good work, you shall earn a 4 or a 5. Read the sections on the next page for details.

Q: What shall we do if we have further questions?

A: You send me an email. If needed, we can arrange an online meeting to discuss your concerns.

Evaluation and Grades

Authenticity of report: The report and code you submit must have been done by group members only.

Note that the authenticity of your submission will be verified. Unlawful copying will be dealt with in accordance with the University's rules.

However, it is acceptable to reuse (with acknowledgement) a limited amount of code from other sources. The academic integrity rules stipulated in the regulations of HKR regarding plagiarism apply.

Grading criteria.

Your grade for this part of the course depends on the following:

- Software (code) 50%
- Documentation 25%
- Presentation 25%

Software:

- The amount, complexity and quality of work you contributed (effort)
- The quality of your code (maintainability, readability, comments, diagrams, etc. included in your report)

Documentation:

- The quality of your written report
- The quality and clarity of your code documentation

Presentation. The quality of your:

- Oral presentation
- Slides
- Q&A
- Practical demonstration

The total sum of your scores in each of the above items determines the final grade outcome as follows:

Score (x)	Final grade
$x \geq 85$	5
$75 \leq x \leq 84$	4
$55 \leq x \leq 74$	3
$55 < x$	U