

Final Exam - Individual Hand-in

Programming, Algorithms and Data Structures [KAN-CDSCO2402U]

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Deadline: Check Digital Exam Platform

Objectives

The objectives of this individual examination are to provide students with the opportunity to select their own case study to showcase their knowledge and critical thinking skills. It also provides an applied set of tasks that enable students to demonstrate Python-programming knowledge gathered during the lecture and exercise sessions.

Instructions

1. Write your complete name and student ID on the report.
2. The project report should be in pdf format of a maximum of 15 pages (including the diagrams and references). The report should conform to the general formatting guidelines and academic standards that are expected for written projects at CBS.
3. The report should include appropriate architectural notation, diagrams, and a description of why you made the architectural decisions.
4. If you have more content to present, feel free to include them in the Appendix to the report. But, not the complete code.
5. APA seventh edition reference style is **ONLY** acceptable.
6. Complete solution code should be submitted as **one single jupyter notebook** and attach separately.

Guidelines

This course provides an introduction to Python programming, object-oriented design and algorithm analysis. Develop a Python-based project which focuses on covering the essentials of Python programming. A well-known application domain must be chosen to allow the student to focus on the solution in terms of architectural options. The report must cover problem analysis, design, and implementation. The report structure must follow **the template which was presented during the last lecture session of Week 48**. The slides are uploaded to Canvas.

1. The problem's requirements must be analysed. It must be accompanied with relevant high-level overview of the system architecture. You can also further explain the problem/processes using relevant diagrams (e.g., flowcharts).
2. The application must cover the object-oriented design concepts of Python programming.
3. Application must follow module programming with Python Try Except functionality.
4. Selected sorting or searching algorithms must be analysed.
5. Discuss how you have met all or partial learning objectives of the course.