Launching into Computer Science May 2021

Assignment 1: Part 1

Submit by end of unit 8.

This is Part 1 of Assignment 1. Part 2 is due in unit 10 and the final part 3 in unit 11. Each part is weighted at 20% of the overall module grade.

Assignment Description: Data Structures and Algorithm Design

One of the core skills that you should have as a computing professional is your ability to design and implement algorithms using a programming language. For this assignment, you will develop an application that will be used to perform our day-to-day actions. It may include, but not be limited to:

- A phone book
- A contact book
- A bank account book
- Personal skill record book
- A record book of your interests and related resources

You may select an application that is relevant to you. You may reach out to your tutor for approval.

Assignment Requirements:

1. A brief outline of the application:
    - Define the objective and purpose of the selected application.
    - Outline the instructions of how the application is to be executed.

2. Design of data structure and algorithms:
    - Define and show the data structures used in this application. Use diagrams to show the steps where necessary. Data structures may include:
        - Insertion
        - Deletion
        - Sorting
        - Searching

- Describe the algorithms using flowchart/pseudocode that you have used for this application. You may have multiple algorithms to show your logic and make sure you demonstrate them using flowcharts/pseudocode.
- It is recommended that you build your functions to execute the tasks and avoid using specialised functions.

3. Test plan:
   - Identify the checkpoints that you would like to test and outline a test plan indicating the range of data you will be using.
   - Outline the expected test results

Learning Outcomes

- Demonstrate a critical understanding of core data structures and programming concepts including algorithm computability.
- Critically evaluate the functionality of different types of software, i.e. operating system, utility programmes, languages and applications.

Turnitin Originality Check

Before submitting your assignment, it is important to check the originality of your work by submitting your assignment to **Turnitin**.

By submitting your assignment to this tool you will receive an originality report which can be used to check that you have not included other authors work without correct citation. It is important to note that submitting your work to the Turnitin Originality Check tool does not count as a submission of your final work. You must still submit your assignment below.

Assignment Guidance

- Submit a single document outlining your responses to section 1, 2 and 3. Your report should include your rationale and necessary diagrams and tables.
- You will receive marks for unsuccessful answers **if** they build a logical argument.
- Ensure your solution includes statements on rationale and efficiency.
- All applicable diagrams and pseudocode should be included.

Academic Integrity and Plagiarism

We take academic integrity very seriously. Academic integrity means acting with fairness and honesty, giving credit to others where you are referring to their ideas or research and respecting the work of others. Plagiarism is defined as: 'Using or copying the work of others (whether written, printed or in any other form) without proper acknowledgement'. Before you finalise your assignment, take time to check that all your statements, including lines of code, are backed up with supporting evidence, that all sources you use - whether referring to their ideas, quoting directly or paraphrasing - are correctly referenced in the text or in the code comments. Correct use of referencing

acknowledges the academic/source whose work has informed yours, enables the reader to find the sources you have used and demonstrates your ability to find and analyse relevant information.

Failure to properly acknowledge the work of others is an academic offence and may result in your work incurring a penalty or, in the most serious cases, you being removed from the course for academic dishonesty.

If you are unsure about referencing or plagiarism there are useful resources available in the Study Skills Hub which is accessible from the menu on the left hand side. If you are still experiencing difficulties with academic integrity then you can contact the Study Skills Team for individualised support **studyskills-kol@kaplan.com**

Submission Instructions

- Submit your saved document below before the end of Unit 8.
- After the deadline, the submission page will be locked.
- If you need to apply for Late Submission, please complete the **late submission of coursework form**

Submission status

Submission status	No attempt
Grading status	Not graded
Due date	Monday, 28 June 2021, 11:55 PM
Time remaining	47 days 4 hours
Last modified	-
Submission comments	Comments (0)

Add submission

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