**CS2100 Assignment 1**

**AY 2025-26 Semester 1**

**Answer Book**

**Deadline for submission: Monday, 15 September 2025, 1PM**

|  |  |
| --- | --- |
| **Name:** |  |
| **Student ID:** |  |
| **Tutorial Group Number:** |  |

After completion, save this file as **AxxxxxxxY.pdf** (where “AxxxxxxxY” is your student ID), then put it together with your **Assg1Q1ans.c** and **Assg1Q4ans.c** into a folder **AxxxxxxxY**, and zip this folder with exactly those three files (and no more) intoa single zip file named **AxxxxxxxY.zip.** Submit this in CS2100 Canvas **Assignment 1 Submission for Tutorial Group X**, where X is your tutorial group.

If you do not fill your particulars above as well as in the two C files, or do not follow the submission instructions you will forfeit 3 marks.

**Marks for identification purpose**: \_\_\_\_\_ / 3 (To be filled in by TA)

□ I hereby declare that I have completed this assignment on my own without discussing the solution with anyone, as well as without the use of AI. (You are required to tick this box before proceeding, indicating your declaration.)

**Question 1.** (20 MARKS)

Important note: Your submission must at least compile without warnings or errors using the default GCC flags.

Grading (To be filled in by TA)

|  |  |
| --- | --- |
| Correctness of code | /10 |
| Compiles with no warnings or errors | /5 |
| Coding style and commenting | /5 |
| Other issues resulting in *penalty* (negative) points (elaborate): |  |
| **Total for Question 1** | /20 |

(To TAs) Flag out suspected plagiarism independently.

**Question 2.** (4 MARKS)

Question to be answered in Canvas->CS2100->Assignments->“Assignment 1 Question 2”.

**Question 3.** (5 MARKS)

Question to be answered in Canvas->CS2100->Assignments->“Assignment 1 Question 3”.

**Question 4.** (8 MARKS)

Refer to Question 4 of **CS2100-Assg1Qns.pdf.**

Student’s solution to be included as **Assg1Q4ans.c** in the ZIP’ed submission folder. We will call your “func” from a test harness “main()” with the appropriate test input. Hence, Assg1Q4ans.c must be the result after the original MIPS assembly code has been corrected.

a. What is the missing instruction that affects the correctness of the code? Explain why this is so.

(1 mark)

ANSWER:

b. Where should this line be inserted? (1 mark)

ANSWER:

The above instruction has to be inserted **after** line number \_\_\_\_\_\_\_ of the original MIPS assembly source in order for the code to be correct.

c. Describe what this program does after you have inserted your correction. (2 marks)

ANSWER:

|  |  |
| --- | --- |
| Sum of 4a, 4b and 4c | **/4** |
| Marks for Assg1Q4ans.c | **/4** |
| **Total for** **Question 4** | **/8** |

**Total Marks for Assignment 1 Questions 1 and 4 and identification mark:**

\_\_\_\_\_\_\_\_\_\_\_\_\_ / 28 (To be filled by TA only)