CM3070

BSc EXAMINATION

COMPUTER SCIENCE

Final Project

Release date: Thursday 21 September 2023 at 12:00 midday British Summer Time

Close date: Friday 22 September 2023 by 12:00 midday British Summer Time

Time allowed: 4 hours to submit

INSTRUCTIONS TO CANDIDATES:

There are five questions in this examination paper. You should answer no more than **THREE** questions. Each question carries 20 marks. The marks for each part of a question are indicated at the end of each part in [.] brackets.

There are 60 marks available on this paper.

Do not write your name anywhere in your answers.

Question 1: Project Approach

The project you did was based on a template, that you chose from a selection of template options. Each template allowed the possibility of a range of different approaches to the actual project.

    a. Which template did you choose, and why?

[4 marks]

    b. What route did you take to deliver the requirements of the project solution?

[4 marks]

    c. Suggest one other approach you could have taken.

[3 marks]

    d. Compare and contrast your own solution (as evidenced in your project) in terms of the following:

        i. Why did you choose your way (rather than the other possible approach you have identified)?

[4 marks]

        ii. What advantages and disadvantages did your way of solving the problem offer, compared to the other approach?

[5 marks]

Question 2: Evaluation and Testing

All projects require some kind of evaluation or testing, or both, in order to make sure that what is being done is fit for purpose.

    a. Describe the testing and the evaluation that you did during your project. This can be related to testing the code you developed, if relevant, or it can be related to the evaluation of the final work that you produced, or both.

[10 marks]

    b. There is not only one way to evaluate or test what you are producing. Describe some other approaches to evaluation and testing that you could have chosen to do during your project? Explain whether you feel these additional or alternative approaches could have been a better thing to do; and justify why you either feel your choices were better, or if not, why you did not take the alternate approach or approaches in your own project.

[10 marks]

Question 3: Self Reflection

Consider what you ended up developing for your project.

    a. Describe briefly what you achieved.

[2 marks]

    b. Identify TWO parts of your work that you would put forward as the best parts of your project. Describe them and explain why you consider them to be the flagship aspects of your project.

[12 marks]

    c. What more could you have done in one other aspect (that is not one of the two best parts described above) of your project? Explain why you did not do this, or how you would go about including it if you were to develop your project further.

[6 marks]

Question 4: Video

As part of what you were required to submit, you were asked to provide a video to support your submission.

a. What was the primary intention of your video? For example, you could have decided to use the opportunity to show your solution in action; you could have decided to describe some of your choices; or other aspects.

[4 marks]

b. Describe your video briefly. For example, did you talk to camera; did you have a voice-over with a screen showing your work, etc. Explain why you made these choices.

[6 marks]

c. You had a maximum video length of 5 minutes as a constraint. Was this short or long, in terms of what you wanted to include in the video? Explain and justify why your video ended up being the length it was. If you felt you would have wanted to make the video longer than the allowed time, explain what you ended up leaving out, and justify why you made the choices you did in terms of what to include. If you ended up with a much shorter video than was allowed, justify why you felt what you included was sufficient to achieve what you wanted with respect to the intention described above.

[10 marks]

Question 5: Development

In order to do your project, there would have been a combination of using skills and abilities that you already had; and learning or developing new abilities, concepts, or skills.

a. Identify TWO things that you already were able to do, that you made use of and that the success of your project relied on. These could be, but are not limited to, particular subject areas (like knowledge of Machine Learning) and particular skills (for example, coding in a specific language or paradigm; or previous experience of managing projects). Discuss each of these in terms of what was needed from these existing abilities to make your project succeed, and what would have been necessary if you didn't already have those abilities.

[10 marks]

b. Identify TWO things that you had to learn how to do, during the course of the project, in order to make your project succeed. These could also be subject areas, skills, abilities, understandings, etc. For each of these, discuss why you needed to develop these abilities, in terms of what was necessary for the success of the project, and how you went about acquiring the skills.

[10 marks]

END OF PAPER