University of Westminster
School of Computer Science and Engineering
4COSC003W Trends in Computer Science
Module Leader: Dr M. Chondrogianni
Weighting: 50%
CW set: 22/1/24
Presentations: weeks of 4 March and 11 March 2024
Deadline: 1/03/24, 13.00pm
Submission: a copy of your presentation and a copy of your report need to be uploaded to the relevant links on BlackBoard on or before 1/03/24 at 13.00.

CW 1: Group Presentation and report

A. Aim

The purpose of this course work is to allow you to acquire and practice different essential learning and professional skills. In particular, it aims to give you the opportunity:

- To get experience of working as part of a group on a specific task.
- To research, devise and deliver a 5 min. oral **individual** presentation, illustrated by PowerPoint or similar slides, to present your findings to your peers.
- To write a brief **1000 words** individual report summarising your research findings.

B. Learning Outcomes (LO)

This course work reflects the module's summative assessment strategy, which involves a coursework with a report writing component and a presentation component.

This coursework allows students to collect information from a variety of academic, authoritative and trustworthy sources to analyse problems in familiar contexts. Students will have to produce a brief report, as per learning outcomes LO4 and LO5 below. Presentations will have to be delivered to support the written work.(LO4).

LO1 Reflect on the role of Computer Science as a discipline and its different branches, its relationships to other scientific and technological disciplines, and the social effects it has had;
LO2 Discuss with confidence key features of current trends in Modern Computing and their impact on your career planning and empoyability prospects;
LO3 Summarise the key components of a professional code of conduct and reflect on how the concepts it enshrines will affect your professional life;
LO4 Work as a team to prepare a presentation on the legal and ethical aspects of specified case studies; and produce a report detailing your work.
LO5 Engage in research and work within a commonly accepted academic and professional framework which employs appropriate styles of documentation and referencing.

C. BCS Core module accreditation criteria covered by this course work

2.1.1 Knowledge and understanding of facts, concepts, principles & theories.
2.1.6 Recognise legal, social, ethical & professional issues.
2.1.9 Knowledge of information security issues
2.3.1 Work as a member of a development team
2.3.2 Development of general transferable skills

D. Presentation Topics you can choose from

1. Quantum Computing

1a. Overview of Quantum Computing. How does it compare to the conventional Von Neumann computer architecture?

1b. Overview of Quantum Computing. Which new opportunities does it bring?
1c. How does the need for a Computer Scientist/Software Engineer to familiarise themselves with new Computing trends, such as Quantum Computing, relate to a Code of Practice (such as the BCS Code of Practice)? What is the purpose of such a Code of Practice?
1d. What impact might Quantum computing have on computer security?
1e. What benefits might we be able to achieve using Quantum Computing than we cannot achieve with conventional computers?

2. **Machine Learning**

2.a. Overview of Machine Learning. How does it compare with conventional computing?
2.b. Overview of Machine Learning. Describe and compare two different machine learning techniques.
2.c. Overview of Machine Learning. How does the need for a Computer Scientist/Software Engineer to familiarise themselves with Machine Learning relate to a Code of Practice (such as the BCS Code of Practice)? What is the purpose of such a Code of Practice?
2.d. Overview of Machine Learning. What are the opportunities it brings to developers? What threats does it pose to society?
2.e. Overview of Machine Learning. Provide examples of legal, ethical and social concerns associated with Machine Learning.

E. Group and Topic allocation

Students should start considering their group and preferred topic/question in week 2.
Students from the same tutorial session will be placed in groups of 3-5 students in week 3 (groups of 4 students will be the norm) during seminars/tutorials. Students can choose their group, or they will be placed in a group by the tutor. Students who are absent during week 3 tutorials will be placed to a group by the tutor and will be notified via email by their tutor. Groups need to choose together the topic you will be working on and which question each of the group members will work on. By the end of the week 3 tutorial you should let your tutor know whether your group have chosen to work with Topic 1 or Topic 2. Groups will be given numbers on a group first-come first served basis. (e.g. 4CSE01_Group1). Each member of the group will choose one sub-question (a-e) from the group's chosen topic. No two students from the same group can chose the same sub-questions. Each student will work independently to produce a 5-minute presentation and a report on their sub-question. A group can work together to provide a sense of continuity to the separate presentations. Groups with less than 5 students do not have to work on all 5 sub-questions.
Your tutor will maintain a list of chosen topics/sub-questions from week 4. Changes of group/topic/sub-question will not be encouraged after week 4. Group information will be published on Blackboard on week 4, by each tutor, including the topic and the date each group/student is to present. Presentation dates will be organised **based on a group's number** (e.g. all 4CSE01_Group 1 members will present on week 7). Remember that group work provides a good opportunity to make new friends and establish a regular learning group. Students are assessed individually by your tutor, so that your performance is not affected by any group irregularities.

F. Presentations

- Your tutor will support each group to choose a Topic. Members of the group need to the negotiate which (single) sub-question each student will undertake.

Each student must research their chosen sub-question; plan the presentation; design a visual presentation; and present orally your research during the dedicated tutorial session.

Ensure that you have considered 4-**5** different academic sources, in addition to lectures/independent study material to prepare your presentation. You need to **refer** to your sources in your presentation. Ideally, a minimum of 3 of your sources will be book or journal-based, while the remaining can be from the Web.
Please **do not** include wikis, personal websites, blogs, newspaper or magazine articles intended for a wider audience as part of your sources. If you find Wikipedia helpful as a starting point, please do not rely on it and do not include it as part of your references. If you include information from a website or a book in your presentation, whether quoted or in your own words, please ensure that the source appears next to it i.e. that it is **referenced**. If you use any diagram or picture from any source, which are not your own, please provide the reference underneath them, as well as in your 'References' section.

- Each student needs to prepare visual aids for their presentation (slides), using PowerPoint or a similar software.
- Indicatively, your presentation might be structured as follows:

  Slide 1: Title; Names of author and ID number; Module Code and Name; Tutorial Slot (Day and Time); Tutor's Name;
  Slide 2: Introduction (aim and structure of the presentation);

  Slides 3-6: Research Findings (divided into sections as appropriate)
  Slide 7: Conclusion and Critical Evaluation (summary of findings/ your opinion);
  Slide 8: References (using an alphabetical referencing system, such as Westminster Cite Them Right Harvard or a numerical referencing system, such as IEEE)
- Presentations in this module are **compulsory** and present a partial fulfilment for passing the module. All members of a group need to be present at the scheduled presentation tutorial slot. If any student does not attend their presentation, but they do submit presentation slides on BlackBoard by the deadline, the mark for this student will be capped to 30%. In case of valid Mitigating Circumstances, the module team will make alternative arrangements for the presentation for the affected student, as per the University regulations.

G. Further advice on how to prepare a presentation

- Group and team work (discussion in tutorial 2)
  https://www.linkedin.com/learning/teamwork-foundations-5/teamwork-is-the-core?u=42314660

- How to give oral presentations (discussion in tutorial 3)
  https://www.linkedin.com/learning/master-confident-presentations/welcome?u=42314660

H. Further information on Referencing

The last page of your presentation should include your References, where the sources you consulted/referred to in your presentation are listed. You might use either an alphabetic referencing system such as the Westminster Cite Them Right Harvard or a numerical referencing system such as the IEEE/Vancouver referencing system. Referencing systems will be discussed during the week 3 lecture and practiced in week 4 tutorials. Information on

referencing can also be found in your course Handbook as well as at the Library self-help guide on 'How to reference your work', available at
https://libguides.westminster.ac.uk/referencing
and https://libguides.westminster.ac.uk/referencing/examples

I. The report

Each student will also need to prepare a short individual report, **no longer than 1000 words (+/- 5%)**, on the same topic question of your presentation, to summarise your findings in a report form. This is also an individual piece of work; no two reports can be identical. You might need to extend your research. You cannot use other students' work, nor can you paste verbatim extracts from your presentation.

Your report needs to be divided into **numbered** sections, starting with an introduction. The final two sections will be the Conclusion and the References section. You will be marked on your research and references as part of the report.

Indicative report structure:
Module: 4COSC003W Trends in Computer Science
Title
Author (name + ID number)

1. Introduction
2. [Sub-topic1]
3. [Sub-topic2]
4. [Sub-topic3]
5. Conclusion

References (Note that the references' section is not numbered, This section is excluded from the word count.)

J. Marking scheme

The marking scheme for this course work can be found on pages 5-7 of this document.
A marking rubric will be used based on the marking scheme below, and will become available on week 4.

K. Avoid Academic Misconduct

Please avoid committing an act of academic misconduct, such as Plagiarism. Before submitting your coursework, do consider the Academic Regulations section 10, which can be accessed at
https://www.westminster.ac.uk/current-students/guides-and-policies/academic-matters/academic-regulations

Your tutor will be able to advise you and support you on any further questions you might have.

4COSC008C Trends in Computer Science
Academic Member of Staff marking this CW:
Tutorial slot:
Date of presentation:

CW1 Group presentation and report writing (weighting 50%)

Student Name:
Student ID:
Group:
Student Course:
Overall mark: **/100**

A. Presentation

Presentation title:

Marking Scheme	Marker's Comments	Mark
1. Structure and coherence Does the presentation follow and appropriate structure? Is the information presented coherently?	4-5 marks: excellent structure of presentation 3-4 marks: satisfactory structure (e.g. attempt to introduce/conclude the topic, clear analysis) 0-2 marks: problematic structure (identify specific problems)	/**5**
2. Content of presentation slides How relevant is the content to the requirements of the task? How accurate is the information presented?		/**30**
2.a The slides were well presented (choice of background; use of pictures/animation; fonts)		/3
2.b Relevant information was presented	Full marks will be given to students who fully explored their topic in the time given.	/20
2.c The student used sound arguments		/3
2.d Arguments were supported with examples		/4
3. Content of oral presentation	Students will achieve full marks if the information on each slide was accompanied by detailed and helpful additional information presented orally. Students will achieve only up to 8 marks if information in addition to information included in the slides was read out from notes.	**/20**
4. Presentation skills		/**10**
4.a Time management	Full marks will be given for students who kept well within their time limit. Presentations shorter than 4 minutes will achieve a max. 2 marks.	.. /5

4.b Engaging with the audience	Full marks will be allocated to students who engaged well with the audience; spoken clearly; kept eye contact.	/5
		Total mark: ……/65

Comments:

B. Report

Topic title:

Assessed by:

Student's ID	**Student's Name**	**Student's Course**	**Mark**

5. Written report		**/35**
a. Report structure		**/2**
b. Report content		**/10**
c. Academic English		**/3**
d. Research/References		**/20**
d.1 Research	Students will achieve half marks (7/15) for clear evidence of relevant research throughout the report, with references to relevant sources. Students will receive full marks if, in addition, they used 7-10 different sources, of which 5 are book/research journal based, as listed in their 'References' section. They will receive 0 (zero) marks for each wiki (including Wikipedia), personal website or public press- based sources cited, which are intended for a wider audience.	/15
d.2 References	Have the students used the Harvard or the Vancouver reference system in a consistent and effective way?	/5
		Total mark: ……/35

Comments: