**University of Westminster**
**School of Computer Science and Engineering**
**4COSC008C Trends in Computer Science**
**Weighting:** 60%
**CW set:** 08/03/23
**Deadline: 07/04/23, 13.00pm (SL Time)**
**Submission:** a copy of your reflections needs to be uploaded to the relevant link on BlackBoard on or before 07/04/23 at 13.00.

## CW2: Portfolio

### A. Aim

The purpose of this course work is to allow you to acquire and practice different essential learning and professional skills, as per the module's learning outcomes LO1, LO2 and LO5. In particular, it aims to give you the opportunity:

- To 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.
- To discuss with confidence key features of current trends in Modern Computing and their impact on your career planning and empoyability prospects.
- To engage in research and work within a commonly accepted academic and professional framework which employs appropriate styles of documentation and referencing.

### B. Learning Outcomes (LO)

This course work reflects the module's summative assessment strategy, which involves a Portfolio coursework involving three separate reflections.

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. Reflections

You need to engage **with all three** reflections below. The word limit is 800 words (+/- 5%, excluding the References' section) for each reflection.
For each reflection, you will need to identify, by undertaking research, a minimum of three appropriate, relevant and reputable sources, in addition to other sources provided as part of lectures, tutorials and independent study.

You will need to submit all three pieces of work on a single file (such as pdf). Please do not submit a zipped file nor a folder.
Each piece of work should have a separate introduction, conclusion and references' section.
This is an individual piece of work; no two Portfolios can be identical, in part or in full. You cannot use other' work unless you reference it.

1. **Employability and career planning- Reflective writing**

   Write a reflection (800 words) on the way current Trends in Computer Science impact on your career planning.

   In your response, you need to discuss

   - potential specialisms you are considering as part of your future career;
   - option modules at levels 5 and 6 you are considering, which will help you achieve your career aims;
   - a minimum of two employability related events you already attended and how it supported/ will support your future career;
   - what further steps you need to take to prepare for your future career as part of your studies.

   In your response you need to refer to at least one appropriate and trustworthy source, and include it in your References' section.

The following links from the Student Hub will be useful:
https://www.westminster.ac.uk/current-students/support-and-services/careers-and-employability-service
https://www.westminster.ac.uk/current-students/employability
https://www.westminster.ac.uk/current-students/studies/study-skills-and-training

You will need to use reflective writing.

Reflective writing includes

- a short description of the activity/project/ subject etc. in question;
- an analysis/interpretation of the outcome: thinking in depth and from different perspectives and trying to explain the outcome.
  This might involve thinking what a specific subject, piece of work, or achievement means to you and your on-going progress as a learner.
- The analysis is followed by an evaluation and a set of actions to be taken.
  Evidence of critical reflection is demonstrated by the learner's awareness that actions are needed to be taken.

Unlike academic writing, when we write reflectively we use the first person 'I', as this type of writing focus on the author, yourself, taking stock of your strengths and areas that you need to improve, and setting up measurable goals for the future.

2. **Quantum Computing- report writing**

   Write a report to compare Quantum Computing with Conventional Computing.
   In your report you need to briefly describe Quantum Computing and outline how it differs from conventional computing. Moreover, you need to identify the new opportunities Quantum Computing brings; and the benefits we can achieve using Quantum Computing

that we cannot achieve through Conventional Computing. Finally, you should briefly touch upon any impact Quantum Computing might have on Computer Security.

You will need to use at least three reputable and trustworthy sources, in addition to references provided as part of lectures/ tutorials/ independent study and include all sources you use in the References' section.

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.

### 3. Internet of things and its cyber security implications- report writing

Write a short report (800 words) to discuss the Internet of Things and its Cyber Security implications. In your report, you will need to introduce the Internet of Things; discuss its difference from the traditional internet; explore the challenges it creates for cyber security; and touch upon ways these challenges can be resolved.
You will need to use at least one reputable and trustworthy source in addition to references provided as part of lectures/ tutorials/ independent study and include all sources you use in the References' section.

## E. Further information on Referencing

All three refection should include a separate References section, where the sources you consulted/referred to in your work are listed. You might use either an alphabetic referencing system such as the Westminster Harvard or a numerical referencing system such as the IEEE/Vancouver referencing system. Information on referencing can 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

## F. Marking scheme

The marking scheme for this course work can be found on pages 4-5 of this document.
A rubric will also be uploaded on BB.

## G. 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 and module leader will be able to advise you and support you on any questions you might have.

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

**CW2 Portfolio (weighting 60%)**

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

| Marking Scheme | Marker's Comments | Mark |
|---|---|---|
| **1. Relevance of reflections**<br>i. How relevant is the content to the requirements of the task?<br>ii. How accurate is the information presented? | Full marks will be given to students who submit work which directly discusses all aspects of each reflection, and where the content's accuracy is supported through in-text citations. | **/30** |
| **2. Confidence in discussing current Trends in Computer Science**<br>How confident is the student in exploring different Trends in Computer Science? | Full marks will be given to students who are able to extend taught material through research and offer a synthesis of different topics. | **/15** |
| **3. Structure and coherence**<br>Do the reflections follow an appropriate structure (i.e. reflective/report writing)?<br>Is the information presented coherently? | 7-10 marks: excellent structure, excellent use of bridges across sections<br>4-8 marks: good/very good structure and coherence (e.g. attempt to introduce/conclude the topic, clear analysis)<br>0- 3 marks: problematic structure and coherence | **/15** |
| **4. Evaluative/ analytical skills and support for claims.**<br>To what extent is there evidence of critical reflection?<br>To what extent are claims supported by research? | Students will receive full marks if they demonstrate that their arguments are based on research.<br>A minimum of three reputable sources are expected to be referred to in addition to sources provided in class. | **/15** |
| **5.Referencing**<br>To what extent is in-text referencing accurate?<br>To what extent is the References' section accurate? | Full marks will be given for students who use an alphabetical or a numerical referencing system accurately and consistently. | **/10** |

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|---|---|---|
| **6. Writing style**<br>To what extent is the language used appropriate? | Full marks will be allocated to students who use appropriate academic language (1st person for reflective writing; 3rd person for report writing). | **/10** |
| **7. Word count**<br>To what extent do the reflections meet the word limit requirement? | Full marks will be allocated to students who respected each reflection's word limit (800 words +/-5%, excluding the References section). | **/5** |
| | | **Total mark: ……/100** |

**Comments:**