

Solent University

Coursework Assessment Brief

Assessment Details

Module Title:	Programming for Problem Solving
Module Code:	COM709
Module Leader:	Prins Butt
Level:	7
Assessment Title:	Personal Learning Record
Assessment Number:	AE1
Assessment Type:	Personal Learning Record
Restrictions on Time/Word Count:	2500 words + artefacts
Consequence of not meeting time/word count limit:	It is essential that assignments keep within the time/word count limit stated above. Any work beyond the maximum time/word length permitted will be disregarded and not accounted for in the final grade.
Individual/Group:	Individual
Assessment Weighting:	AE1: 100%
Issue Date:	20 th October 2022
Hand in Date:	13 th January 2023
Planned Feedback Date:	Within 4 working weeks
Mode of Submission:	Online via SOL
Number of copies to be submitted:	1 copy of the following: <ul style="list-style-type: none"> • a report in pdf format • software artefact in zip file
Anonymous Marking	This assessment will not be marked anonymously

Introduction

A personal learning record provides evidence of your learning and can be used to assess your participation, understanding and achievements.

As part of this assessment, you are required to assemble a personal learning record which evidences the learning outcomes for this module.

To help you create your personal learning record and evidence your learning, you should complete the following activities:

Personal Learning Record Activity 1: Summary of Computing Concepts

Type: Theory

Weighting: 20% of Personal Learning Record

Produce a summary of no more than 750 words explaining key computing concepts. Your summary should cover the following:

Main concepts:

- The general architecture of a computer system.
- How computer systems represent and store data.
- Number systems and how they are used by computer systems.
- Boolean logic and how it is used by computer systems.
- File organisation and disk storage.

Additional brief concepts:

- The role of operating systems.
- Computer networking basics and the Internet.

Your summary must include some suitable citations to relevant literature using an appropriate and standard referencing style.

Your summary may include suitable figures.

The word count includes any headings, citations, figure titles, etc. that make up the body of your work but does not include the list of referenced literature.

Personal Learning Record Activity 2: Summary of Program Construction

Type: Practical Application

Weighting: 25% of Personal Learning Record

Produce a summary of no more than 750 words evidencing how computer programs are constructed. Your summary should include the following:

Main concepts:

- Developing basic computer programs.
- The purpose and application of appropriate programming standards and/or code conventions.
- Program structure and fundamental programming constructs
- The role and application of version control.

Additional brief concepts:

- Error handling and debugging

Your summary must be supported with evidence of practical application. This should be assembled from the completion of the weekly class tasks.

Examples of evidence may include annotated code snippets and screenshots of program executions.

The word count includes any headings, captions, figure titles, etc. that make up the body of your work.

Personal Learning Record Activity 3: Designing and Developing Computer Programs

Type: Practical Application

Weight: 55% of Personal Learning Record

Consider the following scenario:

You have been provided with a CSV file containing data related to the 'Billboard "Top 100" Songs'.

You are required to design and develop a computer program that loads and processes the data. Your computer program should present the user with a menu of containing several options. When a user selects an option, the user should be presented with the result of processing that option. What options are made available to the user are up to you, but some examples include:

- Retrieve the details for the top ranked song for a particular day
- Retrieve the details of the artist with the most top ranked songs
- Retrieve the details of the 10 songs with the longest number of weeks on the board
- Retrieve the song that has moved the most in ranking on the board
- Visualise the top songs (the criteria for 'top' is up to you)

You will achieve higher grades for:

- Implementing user-defined functions
- Modular design and development
- Suitably testing your solution
- Using version control
- Data visualisation

You are required to use the following tools to develop your computer program:

- PyCharm or IDLE as your integrated development environment
- Python 3.8+ as the standard python library
- Additionally, the following libraries/modules may be imported and utilised:
 - csv - to process CSV files
 - matplotlib - to produce visualisations
 - unittest - to create unit tests
- Git Tools and GitHub for version control
- No other python libraries or modules should be used unless explicitly permitted by the module leader.

In addition to your computer program, you should also produce a summary of no more than 1000 words discussing the design and implementation of your solution.

The discussion should focus on explaining how you have achieved each functionality with suitable technical details.

Expectations

The assessment must be completed individually. You must not share, in part or whole, your assessment with another party other than the module tutor and for the purpose of submission to the university. You must ensure that the University's academic misconduct guidelines are followed in their entirety.

Assessment Criteria

Your assessment will be graded according to the following criteria:

Summary of Computing Concepts (20%)	<p>For a basic grade, you should provide a clear summary of most the concepts. This should be supported with appropriately cited sources of literature.</p> <p>For an intermediate grade, you should provide a detailed discussion that is supported with well chosen references.</p> <p>For the highest grade, you should provide extensive and critical discussion that covers all key concepts. The discussion should be provide an extensive review of appropriately cited literature from high quality sources.</p>
Summary of Programming Concepts (25%)	<p>For a basic grade, many of the key concepts should be suitably discussed and supported with evidence from class work.</p> <p>For an intermediate grade, most of the key concepts should be discussed and supported with well chosen examples of evidence from class work and some relevant literature.</p> <p>For the highest grade, a high-quality discussion should be provided. This should cover all the key concepts with extensive evidence and suitable literature. Examples should be carefully selected, and the discussion should provide a clear and detailed narrative.</p>
Design and Development of Computer Programs (55%)	<p>For a basic grade, the solution should address many of the requirements and be functional.</p> <p>For an intermediate grade, the solution should address most of the requirements and provide a strong solution. Design and development concepts should be suitably applied with evidence of a systematic approach to development. Some testing should be performed and suitably documented.</p>

	For the highest grade, the implemented solution must address all the requirements and provide a robust and sophisticated solution. The solution should demonstrate a thorough application of design and development concepts covered in class including user-defined functions, modular design, visualisation and version-control. The solution should evidence the application of more advanced design concepts, systematic development, extensive testing and provide a fully functional solution.
--	--

Submission

You should use the assessment submission link on SOL to submit the following 2 files:

- A zip file containing your software artefact. This should contain all your code but NOT the report.
- A PDF file for your report. This should not be included in the zip file but instead submitted as a separate file.

You should ensure that your submission complies with academic misconduct guidelines, is your own work and any external sources have been appropriately referenced.

Learning Outcomes

This assessment will enable students to demonstrate in full or in part the learning outcomes identified in the Module descriptors.

Late Submissions

Students are reminded that:

- i. If this assessment is submitted late i.e. within 5 working days of the submission deadline, the mark will be capped at 40% if a pass mark is achieved;
- ii. If this assessment is submitted later than 5 working days after the submission deadline, the work will be regarded as a non-submission and will be awarded a zero;
- iii. If this assessment is being submitted as a referred piece of work then it must be submitted by the deadline date; any Refer assessment submitted late will be regarded as a non-submission and will be awarded a zero.

<https://students.solent.ac.uk/official-documents/quality-management/academic-handbook/2o-assessment-principles-regulations-temporary-amendments-for-covid-19-contingency-plans.pdf>

Extenuating Circumstances

The University's Extenuating Circumstances procedure is in place if there are genuine circumstances that may prevent a student submitting an assessment. If students are not 'fit to study', they can either request an extension to the submission deadline of 5 working days or they can request to submit the assessment at the next opportunity (Defer). In both instances, students must submit an EC application with relevant evidence. If accepted by the EC Panel there will be no academic penalty for late submission or non-submission dependent on what is requested. Students are reminded that EC covers only short-term issues (20 working days) and that if they experience longer term matters that impact on learning then they must contact the Student Hub for advice.

Please find a link to the EC policy below:

<https://students.solent.ac.uk/official-documents/quality-management/academic-handbook/2p-extenuating-circumstances.pdf>

Academic Misconduct

Any submission must be students' own work and, where facts or ideas have been used from other sources, these sources must be appropriately referenced. The University's Academic Handbook includes the definitions of all practices that will be deemed to constitute academic misconduct. Students should check this link before submitting their work.

Procedures relating to student academic misconduct are given below:

<https://students.solent.ac.uk/official-documents/quality-management/academic-handbook/4l-student-academic-misconduct-procedure.pdf>

Ethics Policy

The work being carried out by students must be in compliance with the Ethics Policy. Where there is an ethical issue, as specified within the Ethics Policy, then students will need an ethics release or an ethical approval prior to the start of the project.

The Ethics Policy is contained within Section 2S of the Academic Handbook:

<https://staff.solent.ac.uk/official-documents/quality-management/academic-handbook/2s-solent-university-ethics-policy.pdf>

Grade marking

The University uses a letter grade scale for the marking of assessments. Unless students have been specifically informed otherwise their marked assignment will be awarded a letter grade. More detailed information on grade marking and the grade scale can be found on the portal and in the Student Handbook.

<https://students.solent.ac.uk/official-documents/quality-management/academic-handbook/2o-annex-3-assessment-regulations-grade-marking-scale.docx>

Guidance for online submission through Solent Online Learning (SOL)

<http://learn.solent.ac.uk/onlinesubmission>