**Faculty of Science and Technology - Department of Computing and Informatics**

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| **Unit Title: Application of Programming Principles** | |
| **Assessment Title:** Programming Tasks | |
| **Unit Level:** 4 | **Assessment Number:**  1 **of**  1 |
| **Credit Value of Unit:** 20 | **Date Issued:** 01/02/21 |
| **Marker(s):** Tim Orman | **Submission Due Date:** 07/05/21 **Time:** 12.30pm |
| **Quality Assessor:** Natalia Chechina | **Submission Location:** Turnitin (& large file submission) |
|  | **Feedback method:** Brightspace |

**This is an individual assignment which carries 100% of the final unit mark**

**Assessment Task**

You will be given an incomplete Flask-Based (Python) web application. Your task is to finish off the incomplete application. This will consist of completing the following sub-tasks:

1. Interface personalisation. [15%]
2. Lab-assisted tasks. [35%]
3. Self-worked task. [35%]
4. Reflective Journal. [15%]

**Interface Personalisation**

Restyle the website interface (web page) to a different design than the one given. Use PARC and Colour Harmony Schemes to help you achieve this.

**Lab-assisted Tasks**

There will be a number of development tasks e.g. the calculator and journal sections that will come with lab guides to help you build them. Where possible Selenium IDE tests will be provided to assist in building these sections. The sections will be marked on completed functionality i.e. how many tests are passed.

**Self-worked Task**

You should complete a Thought of The Day section that randomly displays a thought from a list (stored in a JSON file on the server) whenever a user visits the page. It should include an admin section that:

1. Displays the complete list of thoughts.
2. Displays the details of a single thought selected from the list.
3. Allows new thoughts to be added to a list and stored on the server.
4. Allows thoughts to be deleted from the list.
5. Is styled according to your interface personalisation.
6. Uses JSON for communication between the client-side and the API on the server.

This section will be also marked on completed functionality.

**Reflective Journal (Appendix A + JSON File)**

You will demonstrate a professional approach by keeping a reflective journal of your progress. Each weekly entry should include the **Status of Tasks** that have been worked on that week. It should show those completed and the status of other tasks you were progressing during that week e.g.

*“Calculator addition and subtraction finished and working, multiplication started.”*

In the **Reflection/Action** column you can write comments about the tasks as you do them. This is a short reflective review, of 150 words maximum, per week. For example, consider questions like

1. What you have been working on and progress made.
2. What went well, and how you dealt with issues arising.
3. What you learnt by completing the tasks
4. What you still do not understand
5. What you would do better next time.
6. What LSEPI (Legal, Social, Ethical and Political Issues) or security issues might impact your work.
7. Sources of knowledge utilized.

It maybe that sometimes you say very little, e.g. “all tests passed successfully” and for other tasks you want to write more e.g.: “struggled with the file writing as I could not figure out how to append to an open file and kept overwriting the original data, I now know I need to alter the File writing object and set append to true”. You should also consider any actions you need to complete to help you improve your programming, e.g. “email tutor to ask for help”, “find more tasks to help me understand while loops” etc.

\*\*\*Note: To start with you can use the attached Reflective Journal form (Appendix A) to record journal entries but once the journal section of the assignment tasks has been completed you should transfer all entries to the journal.json file contained within the application.

**Submission Format**

Your submission should be:

1. A single zip file containing your completed app uploaded to the large file submission link.
2. A copy of the journal.json file, containing your personal journal entries, uploaded to the Turnitin submission link.

These should be uploaded to Brightspace by the **Submission Due Date** and time(see above).

**Marking Criteria**

A guide to marking criteria is supplied in Appendix B.

**Feedback**

A mark sheet based on the table in Appendix B will be used. This will be completed by the marker and submitted for you to review on Brightspace.

**INTENDED Learning Outcomes (ILOs)**

This assignment tests your ability to:

1. Design and implement solutions to simple problems using appropriate software languages.
2. Demonstrate an understanding of the importance of developing software in an ethical, secure, and professional manner.
3. Demonstrate the appropriate use of data structures in simple programs.
4. Test and debug a given program by using a suitable testing strategy.

**QUESTIONS ABOUT THE BRIEF**

Questions about the assignment brief can be asked during lectures or seminars. You may post questions on Piazza (linked in Brightspace) and ask questions about the brief. This means ALL students have fair and equal access to the answers given. It will also be faster as questions can be answered by the first member of the unit team to be available. Emails should only be sent direct to the unit staff if they are of a private nature.

**Signature Marker:** *Tim Orman*

**HELP AND SUPPORT**

* If a piece of coursework is not submitted by the required deadline, the following will apply:

1. If coursework is submitted within 72 hours after the deadline, the maximum mark that can be awarded is 40%. If the assessment achieves a pass mark and subject to the overall performance of the unit and the student’s profile for the level, it will be accepted by the Assessment Board as the reassessment piece. The unit will count towards the reassessment allowance for the level; This ruling will apply to written coursework and artefacts only; This ruling will apply to the first attempt only (including any subsequent attempt taken as a first attempt due to exceptional circumstances).
2. If a first attempt coursework is submitted more than 72 hours after the deadline, a mark of zero (0%) will be awarded.
3. Failure to submit/complete any other types of coursework (which includes resubmission coursework without exceptional circumstances) by the required deadline will result in a mark of zero (0%) being awarded.

The Standard Assessment Regulations can be found on **Brightspace**.

* If you have any valid **exceptional circumstances** which mean that you cannot meet an assignment submission deadline and you wish to request an extension, you will need to complete and submit the Exceptional Circumstances Form for consideration to your Programme Support Officer (based in C114) together with appropriate supporting evidence (e.g, GP note) normally **before the coursework deadline**. Further details on the procedure and the exceptional circumstances form can be found on **Brightspace**. Please make sure that you read these documents carefully before submitting anything for consideration. For further guidance on exceptional circumstances please see your Programme Leader.
* You must acknowledge your source every time you refer to others’ work, using the **BU Harvard Referencing** system (Author Date Method). Failure to do so amounts to plagiarism which is against University regulations. Please refer to <http://libguides.bournemouth.ac.uk/bu-referencing-harvard-style> for the University’s guide to citation in the Harvard style. Also be aware of Self-plagiarism, this primarily occurs when a student submits a piece of work to fulfill the assessment requirement for a particular unit and all or part of the content has been previously submitted by that student for formal assessment on the same/a different unit. Further information on academic offences can be found on **Brightspace** and from <https://www1.bournemouth.ac.uk/discover/library/using-library/how-guides/how-avoid-academic-offences>
* Students with **Additional Learning Needs** may contact Learning Support on [www.bournemouth.ac.uk/als](http://www.bournemouth.ac.uk/als)
* You should not be conducting any primary research (i.e. carrying out an investigation to acquire data first-hand, for example, where it involves approaching participants to ask questions or to participate in surveys, questionnaires, interviews, observations, focus groups, etc.) unless otherwise specified in the brief. However, if there is a genuine requirement to collect primary research data you will require ethical approval before doing so. In the first instance, please discuss with the Unit Leader. The collection of primary data without appropriate ethical approval is a serious breach of  Bournemouth University’s [Research Ethics Code of Practice](https://intranetsp.bournemouth.ac.uk/documentsrep/8B-research-ethics-code-of-practice.pdf) and will be treated as Research Misconduct.

**Disclaimer:** The information provided in this assignment brief is correct at time of publication. In the unlikely event that any changes are deemed necessary, they will be communicated clearly via e-mail and Brightspace and a new version of this assignment brief will be circulated.

**Reflective Journal (Appendix A)**

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| **Week/Date** | **Status of Tasks** | **Reflection/Action** |
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**Assessment Guide (Appendix B)**

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|  | Excellent>80 | Good 65-80 | Average 50-65 | Weak 40-50 | Failing <40 |
| Interface personalisation. [15%] | Aesthetically pleasing with creative application of PARC etc. | A good interface showing consistent use of PARC, frameworks (e.g. W3.css) etc. | A reasonable interface that shows some use of PARC etc. | A few areas where PARC etc. is applied | Very little evidence of use of PARC or colour harmony schemes |
| Lab-assisted tasks Completed. [35%] | All | Most | Some | Few | Very few or none |
| Self-worked task Completed. [35%] | All | Most | Some | Few | Very few or none |
| Reflective Journal. [15%] | Adds lots of good analysis/reflection that shows the student has really been grappling with the issues-arising | Regular entries with some analysis/reflection | Some entries with a reasonable amount of content | Few/Sporadic entries with limited content | Very few or no journal entries |