LIN6209

Project Feedback

Student ID:

# Python Fluency

## EXCEPTIONAL / OUTSTANDING

You have demonstrated you have an exceptional / outstanding of the Python programming language evidenced by your use of variables; numeric, textual, and file data types; sequential execution; conditional execution; and the encapsulation of code into functions

Your code is clear and well designed.

Comments in your code are judicious and to the point.

Functions are used to decompose and segment the problem into smaller and more understandable units of code that are potentially re-usable.

Your debugging of coding problems further demonstrates your understanding of the innards of python, datatypes, and objects.

You have searched for and found python libraries and successfully installed them into your python environment and imported them into you programs.

## VERY GOOD:

Same as excellent but with caveats

## GOOD:

You have demonstrated a good understanding of the python language.

Your code is clear and easy to understand.

Functions are well used to decompose the overall problem into smaller, more understandable, units of code.#

Comments are judicious and to the point.

The analysis and debugging of the problems encountered further demonstrates the students good understanding of the innards of python, datatypes, and objects.

You have searched for and found relevant python libraries and successfully imported them into your code.

The analysis and debugging of the problems encountered further demonstrates the students good understanding of the innards of python, datatypes and objects.

## ADEQUATE:

Your fluency with the language is still developing as is illustrated by the fact that:

* your functions rarely call each other despite there being many opportunities to do so.
* values are often hard coded meaning that the re-usability of most of your code and functions is very limited.
* functions are not used even though there are clearly opportunities where this would have been beneficial.

Debugging of coding problems is successful but at the cost of over-simplifying the task and limiting the future re-usability of the code which indicates limited knowledge of the innards of python and objects.

The code works and fulfils its design objectives, but probably other choices of datatypes would have been better.

Debugging of coding problems is successful but perhaps reveals aspects of your still developing knowledge of the innards of python and objects.

You have demonstrated a basic but still developing understanding of the Python programming language and programming structures: variables; numeric, textual, and file data types; sequential execution; conditional execution; and the encapsulation of code into functions.

## MISC:

You have also demonstrated your ability to graphically present your results in visually appealing ways using the matplotlib library.

You have searched for and found relevant python libraries and successfully used them.

(According to docs NLTK should work on any version of Python after 3.7?).

# Computational Thinking

## EXCELLENT:

You are clearly able to think in computational terms and successfully translate an initial problem statement into a sequence of computationally tractable steps.

There is ample evidence you can analyse a problem in computational terms, simplifying and decomposing the original problem statements into its essential components and then design and build software to implement it.

Analysis and design of the problem statement is well thought through and neatly decomposed into packages of independent functionality that can be implemented in python and assembled into a working application.

The problem has been explored in successive stages with each iteration building upon the previous.

Problems encountered are explained and clearly thought through with the root cause being identified and solved.

The problem has been explored in stages with each iteration building upon the previous.

The coding problems/exceptions encountered are explained and clearly thought through with the root cause being identified and solved.

## VERY GOOD:

There is good evidence that this student can analyse a problem in computational terms, simplify and decompose it into its essential components and then design a computationally implementable representation.

The problem has been explored in stages with each one building upon the previous.

Problems encountered are explained and clearly thought through with the root cause being identified and solved.

## GOOD:

The plan of approach is well thought out and neatly decomposed into packages of functionality that can be implemented into python and assembled into a working application.

The analysis and debugging of the problems encountered further demonstrates the students good understanding of the innards of python, datatypes, and objects.

The problem has been explored in stages with each one building upon the previous.

Problems encountered are explained and clearly thought through with the root cause being identified and solved.

There is good evidence that this student can analyse a problem statement and build the software to implement it.

Testing is sufficiently adequate to demonstrate that the software is broadly correct

BASIC

Your ability to think in computational terms is still developing.

Although the problem been decomposed into simpler parts which have been encapsulated as functions, they have not linked those functions together. Return values from functions are instead ‘hard coded’ as explicit values in the code that uses those return values. This means that the reusability of most of the functions developed is practically zero.

This student’s ability to think in computational terms is obviously still developing.

Although the student has decomposed the project into simpler parts and encapsulated those parts into functions, they have not linked those functions together. Return values from functions are instead ‘hard coded’ as explicit values in the code that uses those return values. This means that the reusability of most of the functions developed is practically zero.

# Project Write-up

EXCELLENT:

The project report is easy to understand, it flows logically from the problem statement and clearly explains what is being attempted, the problems encountered, and the options and compromises chosen along the way.

The project report is easy to understand and flows logically from the problem statement through analysis, design, coding, testing and the delivery of the final product..

Your report clearly explains what is being attempted, explains and justifies the options and compromises chosen along the way, and explains the how they were resolved.

Reflections on how the project progressed, and suggestions for a future iteration are relevant and insightful.

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First some quibbles: One of the imports is missing (import pandas as pd). The notebook is not executable as it stands. The cells must be executed in a non-linear order: first cell [1], then all the cells in the appendices, then the cells in the report sections.

That said, this is a very good project report. It reads well, explains the project’s progress step-by-step clearly laying out the problems encountered and the reasons why particular options and compromises were chosen.

First some quibbles: It would have been nice to have a list of the libraries that need to be installed into the python environment for each of these notebooks to work. Also, that a Reddit API account is required. If the data extracted from reddit had been saved in some local files, then a fourth notebook could have explored that data independently of the need for reddit accounts and some of the libraries.

That said, this is a very good project report. It reads well, explains the project’s progress step-by-step, clearly laying out the problems encountered and the reasons why particular options and compromises were chosen.

VERY GOOD:

The project report reads well, explains the project’s progress step-by-step, clearly lays out the problems encountered and the reasons why particular options and compromises were chosen.

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GOOD:

First, a quibble: It is clear that the code has been developed in one or more Jupyter notebooks, yet you have chosen to present your report in a single python file. This seems counterintuitive as Jupyter Notebooks offer many features for presenting a project report appealingly, plus I’d guess that doing so would have saved a lot of time. Another benefit is that it would have made it easier for a reader of this report (me) to explore and execute the code and see it working ‘for real’.

This is a good project report. It is easy to follow and logically structured with the problems encountered clearly explained and the possible solution options compared.

The code has evidently been developed in one or more Jupyter notebooks, yet the student has chosen to present their report in a single python file. This seems counterintuitive as Jupyter Notebooks offer many features for presenting a project report appealingly, plus I’d guess that doing so would have saved you time. Another benefit is that it would have made it easier for a reader of this report (me) to explore and execute the code and see it working ‘for real’.

This is a good project report. It is easy to follow and logically structured with the problems encountered clearly explained and the possible solution options compared.

## BASIC

The report is adequate but is too often just a simple description of the code written and what individual statements do.

Discussion of the underlying design, and why that design was chosen in preference to any other possibility is usually missing.

There is no discussion of alternate designs, no reflection on alternative ways in which that design might have been done differently.

## MISCELLANEOUS COMMENTS

If the data extracted from the various on-line sources had been saved in some local files, then a fourth notebook could have explored that data independently of the need for reddit accounts and some of the libraries.

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First some quibbles: It would have been nice to have a list of the libraries that need to be installed into the python environment for each of these notebooks to work.

This is clear and well explained. Problems encountered are described with the workarounds attempted.

# Summary Remarks

This is a excellent / very good/ good / satisfactory project.

EXCELLENT:

This project clearly demonstrates you can conceptualise, design, plan, execute and deliver a programming project of some complexity.

Reflections on how the project was developed and suggestions for future iterations are relevant and insightful.

It would hgeve been helpful if you had stored intermediate results in external files.

It would have been nice to have had a feature that filtered out ‘common’ words from the final word-counts. This might have avoided all the charts listing almost identical words charted in almost exactly the same way.

This is an excellent project.

It clearly demonstrates this student is able to conceptualise, design, plan, execute and deliver a programming project of some complexity.

Well done.

It clearly demonstrates this student can conceptualise, design, plan, execute, and deliver a programming project of considerable complexity.

Well done.

VERY GOOD:

GOOD:

This is a good project tackling a difficult subject. Well done.

This is a good project.

It would have been nice to have had a feature that filtered out ‘common’ words from the final word-counts. This might have avoided all the charts listing almost identical words charted in almost exactly the same way.

Well done.

This is a good project tacking a difficult subject. Well done.

BASIC:

Your knowledge of programming and computational thinking is clearly still developing.

Although there is still much left to learn his project demonstrates an adequate level of knowledge has been attained.

Well done for changing your project focus after the initial analysis of your original proposal. Far better to make that change early and decisively rather than sinking time into something you thought would be too difficult was the right thing to do.

The plan of approach is well thought out and neatly decomposed into packages of functionality that can be implemented into python and assembled into a working application. The problem has been explored in stages with each one building upon the previous. Problems encountered are explained and clearly thought through with the root cause being identified and solved.

Despite the above, the overall approach is still somewhat superficial, and I would have liked to have seen more options explored and represented as functions.

After it was discovered that the original date was ‘too big for the computer’ the data was sampled to a manageable size in more than one way, the results tested against each other, and the most representative selected.