

## Programming Solutions for Enterprises

Term One 2021/22

WARWICK BUSINESS SCHOOL

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### 100% Programming Solutions for Enterprises

3,500 words:

This is a strict limit **not** a guideline: **any piece submitted with more words than the limit will result in the excess not being marked**

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#### Part 1 Programming Solution (70%)

You need to develop a programming solution in the form of python script(s) to solve the business problem given in the following case.

You are assigned by Mr. Smith, head of IT support at Warwick Business School, to develop a room-booking system similar to the one used by the central university

(<https://warwick.ac.uk/services/its/serviceessupport/av/lecturerrooms/roominformation/>). The system should allow users to:

1. View the detail of any specified room (e.g. 2.005), such as capacity, equipment, location, availability, etc., and then book the room if available.
2. Search available room based on given criteria, such as time slots(required), capacity (optional), and equipment (optional).

For demonstration, you may generate an arbitrary dataset based on rooms listed in the central university system. An example data set is shown in the appendix. Your dataset can be structured differently.

#### Requirements:

1. All codes must be implemented using Python.
2. You need to specify the functionalities you try to accomplish in your script.
3. Codes must be well documented, such as comments at the beginning or a separate readme.txt file describing what each file (script, data file, etc.) does, how to run all codes, and how to organize your files.
4. You may search online or discuss with other students, but you must work independently to write your own code.

#### Notes:

- Don't overcomplicate the problem. You don't need a database for this (It's OK to have one if you prefer).
- Additional Python packages (not covered in class), such as Pandas and Tkinter, are welcomed to use. But they should be well documented.
- Your primary goal is to demonstrate your understanding of python programming.

- You are not expected to replicate the whole system but rather to “reproduce” the two main functionalities.
- The system could be operated with or without GUI.
- You don’t have to mimic the design of the actual webpage.
- Be creative.

## Part 2. Reflective Report (30%)

Write a reflective essay (around 800 to 1000 words) **based on your experience** of

developing the programming solution in part 1<sup>i</sup>. In this course, we have covered a wide range of ideas and techniques from agile thinking to modularity to open innovation and Python programming. Refer back to the week 1 and week 10 slides on the broad course objectives and discuss what you have learned during the class, in particular connecting to these objectives, and how it may assist you in achieving further academic and work-related goals.

- Depth is generally more important than breadth.
- Link the discussion to your experience.
- Being critical and analytical than being descriptive.

## Appendix Example Dataset

ID	Building	Name	Capacity	Type	Facilities
1	Engineering	IMC.002	200	Teaching	Fixed Computer, Laptop Input, Data Projector
2	Library	LIB 1	80	Teaching	Fixed Computer, Document Camera

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Booking ID	Room ID	Start	End
1	1	2021-10-11 11:00	2021-10-11 11:30
2	1	2021-10-12 14:00	2021-10-11 15:00
3	2	2021-10-11 08:00	2021-10-11 12:00

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<sup>1</sup> You may also reflect your experience of completing the assessment/project for another module. In that case, a short description of the work needs to be covered in the report to provide necessary context.

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**SUBMISSION DEADLINE: 20:00 (UK time) Tuesday 4<sup>th</sup> January 2022**

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[Word Count Policy and Formatting](#) (found in your Masters Student Handbook Section 6.2c)

[Guidelines for Online Submission](#) (found in your Masters Student Handbook Section 6.2e)

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The submission deadline is precise and uploading of the document must be completed before 20.00 (UK time) on the submission date. Any document submitted even seconds later than 20.00 precisely will be penalised for late submission in line with WBS policy. Please consult your student handbook on my.wbs for more detailed information.

The online assignment submission system will only accept documents in portable documents format (PDF) files. Please note that we will not accept PDF files of scanned documents. You should create your assignment in your chosen package (for example, Word), then convert it straight to PDF before uploading. Please place your student ID number, NOT YOUR NAME, on the front of your submission as all submissions are marked anonymously.

All the scripts should also have the following paragraph included on the front page:

*This is to certify that the work I am submitting is my own. All external references and sources are clearly acknowledged and identified within the contents. I am aware of the University of Warwick regulation concerning plagiarism and collusion.*

*No substantial part(s) of the work submitted here has also been submitted by me in other assessments for accredited courses of study, and I acknowledge that if this has been done an appropriate reduction in the mark I might otherwise have received will be made.*

**PLEASE ENSURE YOU KEEP A SECURITY COPY OF YOUR ASSESSMENT**

**Your Academic Writing and Avoiding Plagiarism Module on my.wbs has lots of useful information on structuring assignments, academic style and demonstrating critical engagement.**

Please ensure that any work submitted by you for assessment has been correctly referenced as WBS expects all students to demonstrate the highest standards of academic integrity at all times and treats all cases of poor academic practice and suspected plagiarism very seriously. You can find information on these matters on my.wbs, in your student handbook and on the University's library web pages [here](#).

The University's Regulation 11 clarifies that '...'cheating' means an attempt to benefit oneself or another by deceit or fraud. This includes reproducing one's own work...' It is important to note that it is not permissible to re-use work which has already been submitted by you for credit either at WBS or at another institution (unless you have been explicitly told that you can do so). This is considered **self-plagiarism** and could result in significant mark reductions.

Upon submission of assignments, students will be asked to agree to one of the following declarations:

**Individual work submissions:**

*I declare that this work is entirely my own in accordance with the University's Regulation 11 and the WBS guidelines on plagiarism and collusion. All external references and sources are clearly acknowledged and identified within the contents. No substantial part(s) of the work submitted here has also been submitted by me in other assessments for accredited courses of study, and I acknowledge that if this has been done it may result in me being reported for self-plagiarism and an appropriate reduction in marks may be made when marking this piece of work.*

By agreeing to these declarations (when the message pops up on submission) you are acknowledging that you have understood the rules about plagiarism and self-plagiarism and have taken all possible steps to ensure that your work complies with the requirements of WBS and the University.

**You should only indicate your agreement with the relevant statement, once you have satisfied yourself that you have fully understood its implications. If you are in any doubt, you must consult with the Module Organiser or Named Internal Examiner of the relevant module, because, once you have indicated your agreement, it will not be possible to later claim that you were unaware of these requirements in the event that your work is subsequently found to be problematic in respect to suspected plagiarism or self-plagiarism.**

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<sup>i</sup> You may also reflect your experience of completing the assessment/project for another module. In that case, a short description of the work needs to be covered in the report to provide necessary context.

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