MSA Assessment Introduction

This is an individual assessment where you will be ranked against your peers. The MSA team has set a minimum standard that we require all students to pass, but we will be expecting to see work above and beyond the minimum specifications (as per industry standards).
Students will be placed in teams with similar assessment scores, and your placement preference is weighted against your group's overall assessment score, along with organisational preference and student preference.

Data Assignment Outline

This assignment requires students to extract data from websites which they will then analyse in order to provide a solution to a business problem. The findings are to be presented in a manner which is accessible to a general audience. The purpose of the assignment is to encourage students to develop the skills required to apply their analytical skills to real world-real world business problems and to communicate their findings to a general audience.
(Note: Students are free to use their preferred software/platform to complete the assignment.)

Basic Requirements

- State the business problem for which you will be providing a solution. Explain any assumption you have made.
- Set up a project on Azure Notebooks (https://notebooks.azure.com/).
- Use web scraping techniques to extract data from relevant resources.
- Use data analysis techniques to clean and transform the data you have scraped.
- Create analysis models based on your assumptions. Compare at least three models and outline the process you used to select the best model.
- Visualize your data source and your findings using Power BI.
- Your Azure Notebook report should include:
    - Details on the business problem you are aiming to solve and relevant assumptions.
    - An explanation of your analysis.
    - An explanation of the model selection criteria you used and a comparison between the model results and your assumptions.
    - A Conclusion with your answer to the business problem

Advanced Requirements (complete at least 3)

- Generate a dataset with more than 3,000 observations using web scraping techniques, each with 10 or more variables.
- At least three regular expression functions have been performed to extract information.
- Include at least three relational datasets in your Power BI reports.
- Create a dashboard/ mobile app using Power BI reports.
- Use at least three DAX formula in your Power BI modelling.

Submission Format

You will be required to complete two specific submission tasks

1) Upload the link to your source code and your reports(.pbix file) to http://aka.ms/msa2019p2 by 8am 17th August 2019. (40%)
2) Present to the MSA team in-person at the assessment centre
    a. Presentations are 15-minute slots
    b. 7 minutes of presentation. You should do a structured presentation using the given slide deck or your own (20%)
    c. 7 minutes of Q&A from the MSA team, we will be assessing your technical ability in-depth (40%)
    d. We will be assessing you holistically. In particular, we will be evaluating the depth of your understanding of your solution, and it's application in the real world. Your presentation and soft skills will also be assessed.

Academic Integrity

The MSA Programme strictly enforces academic integrity and students that do not uphold academic integrity will not be allowed to proceed within the programme. Any work you submit should be your work and differentiated from others if you have collaborated or troubleshooted with other parties. This includes any sample solutions and tutorials we provide. Please clarify with us at nzmsa@microsoft.com if you have questions.

Deadline: 8am 17th August 2019

Book interview here: http://aka.ms/msa2019p2submission
Upload your code here: http://aka.ms/msa2019p2
Submit group preferences here:
http://aka.ms/msa2019p2teams (1 per group)

Have a question?
Email nzmsa@microsoft.com or ask on the Facebook group