Assessment Brief

Module Title:	Data Visualization
Module Code:	B9DA106
Assessment Title:	Continuous Assessment One – Tableau
Assessment Number:	1
Assessment Type:	Tableau Practical Assignment
Individual/Group:	Individual
Assessment Weighting:	40%
Issue Date:	20/02/2020
Due Date/Time:	**Deadline – 11:55 pm on Wednesday 11/03/2020**
Mode of Submission:	MOODLE

Learning Outcomes to be assessed

1. Ability to visualize and analyse datasets using Tableau

Tableau Practical Assignment **(100 Marks)**

Context

The city of Minneapolis in the state of Minnesota, United States is divided into 5 Police Precincts to facilitate effective police patrolling. Officers are responsible for patrolling their own precincts. They have authority to stop individuals/vehicles to investigate suspicious activities or traffic violations, and if deemed necessary, to search individuals/vehicles. However, only a small percentage of stops require police action. Action taken can be arrest if illegal/antisocial activity is identified, or issuance of ticket if traffic violation is noticed. As per state regulation, relevant data is logged into a central database by the concerned officer, after concluding each stop.

The given **MplsStops.xlsx** dataset contains data pertaining to 34,178 stops made by Minneapolis Police in the year 2017.

Task

Taking inspiration from the 'Drill-Down Analysis Dashboard' covered in one of the lectures, and using the given dataset, create a dashboard with items arranged in the following order:

1. Quick Filters: Three filter controls titled 'Select Stop Category', 'Select Gender', and 'Select Search Scenario' to filter all visualizations. The 'Select Search Scenario' filter control should have four options – 'Person Only', 'Vehicle Only', 'Person & Vehicle', and 'No Search' to allow filtering as per one of the four possible search scenarios for any stop – only stopped person is searched, only stopped vehicle is searched, both person and vehicle are searched, nothing is searched.

[10]

2. Visualizations 1 & 2: Display number of stops in precincts, and number of stops in neighborhoods respectively. Title them as 'Select Precinct' and 'Select Neighborhood'. Tooltips should display the following information -
Visualization 1 - 'Precinct', 'Number of stops' and 'Number of actions taken'
Visualization 2 - 'Precinct', 'Neighborhood, 'Number of stops' and 'Number of actions taken'

[15]

3. Visualization 3: Display number of stops, and number of actions by month on a single chart. Title this visualization as 'Select Month'. Tooltips should display the relevant information.

[10]

4. Visualizations 4 & 5: Display number of people searched, and number of vehicles searched respectively. Title them as 'People Searched' and 'Vehicles Searched'. Tooltips should display the relevant information.

[10]

6. Visualization 6: A map to show locations of stops in the five precincts. Title this visualization as 'Location'. Tooltips should display 'Precinct', 'Neighborhood', 'Percentage of stops that required action in precinct in 2017', and 'Percentage of stops that required action in neighborhood in 2017'. Additionally, all such stops that required police action should be colored red, while others should be colored blue.

[30]

Action Filters

Implement the following action filters:

i). Source – Visualization 1, Targets – Visualizations 2,3,4, 5, and 6.

ii). Source – Visualization 2, Targets – Visualizations 3,4, 5, and 6.

iii). Source – Visualization 3, Targets – Visualizations 4, 5, and 6.

[5]

Story

Prepare a Story, presenting four meaningful insights extracted from visualizations or dashboard. [20]

Students must submit: -

Tableau Workbook File (.twb) within a zipped folder

Follow the naming convention:

Tableau file should be named as –

CA1_StudentNumber_Firstname_Surname.twb

Zipped Folder should be named as –

CA1_StudentNumber_Firstname_Surname.zip

Assessment Criteria

Visualizations or dashboard will be graded according to the following criteria:

1. Data quality (visualizations displaying correct data) [Weightage – 50%]

2. Ease-of-understanding (Choice of chart, formatting (titles, labels, colors, etc.) presence of filter controls) [Weightage – 50%]

Story will be graded on the quality of derived insights, and their presentation.

General Assessment Submission Requirements for Students:

1. Online assignments must be submitted no later than the stated deadline.

2. All relevant provisions of the Assessment Regulations must be complied with. Students are required to refer to the assessment regulations in their Student Guides and on the DBS Quality Assurance Handbook Guide.

3. Extensions to assignment submission deadlines will be not be granted, other than in exceptional circumstances. To apply for an extension please contact the programme coordinator.

4. Students are required to retain a copy of each assignment submitted.

5. Assignments that exceed the word count (if any) will be penalised.

6. Dublin Business School penalises students who engage in academic impropriety (i.e. plagiarism, collusion and/or copying). Please refer to the referencing guidelines on Moodle for information on correct referencing.

Late Submission

Assignments submitted after the deadline published in the assessment specification, including any revised deadline in case of approved extension, are deemed to be 'late' and are penalized as follows:

- Where an assignment is submitted between 1 and 14 days late, a penalty of 2 marks per day is applied per day or part thereof.

- Where an assignment is more than 14 days late, it is annotated at the discretion of the lecturer, but no marks can be awarded.

- Where the assessment is undertaken in a group, the piece of work should be submitted in its complete entirety, and any penalty for late submission incurred applies to all group members.