**Assignment Deliverables and Delivery Dates:**

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|  | **Assignment Deliverable** | **Deliverable Date** | **Deliverable** | **Percentage** |
|  | Proposed Analytical Solutions | 7/03/2019 | Word document | 2% |
|  | Definition of the ABT table | 21/03/2019 | Word document | 5% |
|  | Create the Data Quality Report | 04/04/2019 | Word document | 8% |
|  | Create a Data Model | 25/04/2019 | Zipped RapidMiner Repository Directory | 10% |

**Assignment Guidelines:**

* Upload all deliverables to Moodle.
* Failure to submit your deliverable by the delivery date and time will result in a 5% penalty administered per day of lateness to your assignment result. No deliverables over a week will be accepted.

**Assignment Details:**

The prison authorities in the USA are seeing an increase in new and reoffending inmates and burdens on their correctional facilities.

A central database of inmates and characteristics of those inmates is kept for all inmates of correctional facilities.

As part of a nationwide review on the entire correctional facility programmes management would like to use data analytics on the data they current hold in order to address the issues of increasing pressures in terms of inmates on correctional facilities.

You have been hired to develop as the data analyst that will assist the correctional facilities management address this business issue.

This assignment is broken down into a number of key deliverables:

1. Proposed Analytical Solutions (provide 3)
2. Definition of the ABT table:
   1. Identify the Descriptive Features
   2. Identify the Target Features
   3. Identify the data types of each descriptive feature
   4. Identify the data types of each target feature
   5. For categorical features identify the values of the categories (i.e. gender is char, categorical and can be (m, M, f or F)

Put the above into a table to make it more readable identify the feature, data type, categorical/non categorical, possible values

1. Create the Data Quality Report.
   1. You will be given a sample ABT for the above. You are required to create a Data Quality Report based on the data provided. Ensure that your Data Quality Report contains the data required for an ABT Data Quality Report (see notes)
   2. Based on the Data Quality Report highlight potential problems and provide solutions to address these problems.
2. Create a data model for the proposed analytical solution selected