**HENLEY COLLEGE  
COVENTRY**

Database Design Concepts

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**Introduction**  
  
The British Telecommunications Company formally known as BT, have requested the services of a database engineer. The database is required to manage customer data, network access and bandwidth limitations which will be read also by external software programmed in Visual Basic.NET.

**Specifications**

Following is an outline of the specifications provided by BT.

**Customer Data Table**

**Customer Table Information**

The customer table is used to provide information to employees about the customer they are dealing with. Employees should be able to update the table from a form which has been developed with simplicity in mind.

**Customer Table Constraints**

The customer data table must provide information within the following constraints.

|  |  |  |
| --- | --- | --- |
| **Field Name** | **Data Type** | **Validation** |
| intCustomerId | Integer | None Primary Key |
| strFirstName | Text | Between 3 and 20 |
| strLastName | Text | Between 3 and 30 |
| strContactNumber | Text | Between 11 and 15 |
| strAddressOne | Text | Between 10 and 50 |
| strAddressTwo | Text | Between 10 and 50 |
| strCity | Text | Between 3 and 50 |
| strPostCode | Text | Between 4 and 10 |
| strEmailAddress | Text | Between 10 and 100 |

**Network Access Table**

**Network Access Table Information**

The Network Access Table provides information about modems which have authenticity on the network. Unique information such as the Migration Authorisation Code (MAC), Media Access Control Address (MACA) and IP Address should be available here.

**Network Access Table Constraints**

|  |  |  |
| --- | --- | --- |
| **Field Name** | **Data Type** | **Validation** |
| intNetworkId | Integer | None Primary Key |
| intCustomerId | Integer | None Primary Key |
| intPackageId | Integer | None Primary Key |
| strMAC | Text | Between 17 and 19. Begins with: BBIP, FTIP, BBDS or BBDP. |
| strMACA | Text | 17 in Length |
| strIpAddress | Text |  |
| strLeaseStart | Text |  |
| strLeaseEnd | Text |  |