|  |  |  |  |
| --- | --- | --- | --- |
| **Must** | **Should** | **Could** | **Won’t** |
|  |  |  |  |

|  |  |
| --- | --- |
| **Requirement** | **Criteria** |
|  |  |

**Module name**

|  |  |  |
| --- | --- | --- |
| **Input** | **Process** | **Output** |
|  |  |  |

**get\_number**

|  |  |  |
| --- | --- | --- |
| **Input** | **Process** | **Output** |
| prompt  number | **BEGIN** get\_number  **WHILE TRUE**  **DISPLAY** prompt  response = **INPUT**  **IF** response **IS NUMBER**  **CONVERT** response to **INTEGER**  **RETURN** response  **ENDIF**  **ENDWHILE**  **END** | prompt  number |

**Student table**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Name** | **Definition** | **Data Type** | **Possible values** | **Validation** | **Format** |
| Stud\_id | Student number | INTEGER | 1002 | Primary key, autoincrement |  |
| F\_name | First name | TEXT | Damien | Not null |  |
| L\_name | Last name | TEXT | Murtagh | Not null |  |
| Grad\_yr | Graduation Year | INTEGER | 2022 | Not null, > current year -1, < current year +12 | #### |
| Cont\_# | Main contact number | TEXT | 0413564234 | Not null, 10 characters | #### ### ### |
| DOB | Date of Birth | TEXT | 13042005 | Not null, 8 characters | DD/MM/YYYY |
| Med\_alert | Medical Alert Flag | TEXT | Y | Y or N |  |
| Email | College email address | TEXT | murtaghd@mbbc.qld.edu.au | Like %@% | aaaaa@aaaaaa |

**show\_stats()**

|  |  |  |
| --- | --- | --- |
| **Input** | **Process** | **Output** |
| none | **BEGIN show\_stats**  **name = get\_user\_name()**  **played = get\_games\_played()**  **won = get\_games\_won()**  **longest = get\_longest()**  **most\_missed = get\_most\_missed()**  **lost = played - won**  **IF played == 0 THEN**  **win\_loss = 0**  **ELSE**  **win\_loss = won / played \* 100**  **DISPLAY name**  **DISPLAY played**  **DISPLAY won**  **DISPLAY lost**  **DISPLAY win\_loss**  **DISPLAY longest**  **DISPLAY most\_missed**  **END** | **name**  **played**  **won**  **lost**  **win\_loss**  **longest**  **most\_missed** |

**get\_most\_missed()**

|  |  |  |
| --- | --- | --- |
| **Input** | **Process** | **Output** |
| user | **BEGIN get\_most\_missed(user)**  **SELECT word**  **FROM Words**  **WHERE word\_id IN (**  **SELECT word\_id**  **FROM Games**  **WHERE user\_id = user AND guessed = False**  **GROUP BY word\_id**  **ORGER BY COUNT(word\_id) DESC**  **LIMIT 1)**  **RETURN sql\_result** | sql\_result |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Line #** | **discount** | **price** | **Conditions** | **Input/Output** |
| 1 |  |  |  |  |
| 2 |  | 200 |  | price ? 200 |
| 3 |  |  | 200 > 100 ? is T |  |
| 4 | 200 \* 15 / 100 = 30 |  |  |  |
| 5 |  | 200 - 30 = 170 |  |  |
| 6 |  |  |  |  |
| 7 |  |  |  | price = 170 |
| 8 |  |  |  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Line #** | **discount** | **price** | **Conditions** | **Input/Output** |
| 1 |  |  |  |  |
| 2 |  | 50 |  | price ? 50 |
| 3 |  |  | 50 > 100 ? is F |  |
| 6 |  |  |  |  |
| 7 |  |  |  | price = 50 |
| 8 |  |  |  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Line #** | **x** | **xSquared** | **Conditions** | **Input/Output** |
| 1 |  |  |  |  |
| 2 |  |  |  | X, X Squared |
| 3 | 1 |  | 1 <= 3 ? T |  |
| 4 |  | 1 \* 1 = 1 |  |  |
| 5 |  |  |  | x = 1, xSquared = 1 |
| 6 | 1 + 1 = 2 |  |  |  |
| 3 |  |  | 2 <= 3 ? is T |  |
| 4 |  | 2 \* 2 = 4 |  |  |
| 5 |  |  |  | x = 2, xSquared = 4 |
| 6 | 2 + 1 = 3 |  |  |  |
| 3 |  |  | 3 <= 3 ? is T |  |
| 4 |  | 3 \* 3 = 9 |  |  |
| 5 |  |  |  | x = 3, xSquared = 9 |
| 6 | 3 + 1 = 4 |  |  |  |
| 3 |  |  | 4 <= 3? is F |  |
| 7 |  |  |  |  |
| 8 |  |  |  | ----------- |
| 9 |  |  |  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Feature** | **Input** | **Expected Output** | **Actual Output** | **Action** |
| Entering date | 12/04/2022 | Value accepted | Value accepted | NA |
| Entering date | 35/13/2022 | Value rejected | Value accepted | Limit to valid dates |
| Entering date | 12/04/2035 | Value rejected | Value accepted | Limit to past dates |
| Entering email | info@test.com | Value accepted | Value accepted | NA |
| Entering email | Info.test | Value rejected | Value rejected | NA |

**check\_if\_adult(age)**

|  |  |  |  |
| --- | --- | --- | --- |
| **age** | **Expected Output** | **Actual Output** | **Action** |
| 10 | False | False | NA |
| 40 | True | True | NA |
| 17 | False | False | NA |
| 19 | True | True | NA |
| 18 | True | False | Check boundary cut-off |

|  |  |  |  |
| --- | --- | --- | --- |
| **Component** | **Concern** | **Data** | **Recommendation** |
| Database repopulation | Taking too long | 1 minute 20 secs to load | Only repopulate data upon update |
| UI Text | Too hard to read | Identified by 7/10 testers | Increase font size and contrast |
|  |  |  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Category** | **Impact** | **Rating** | **Justification** | **Recommendation** |
|  |  |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirement** | **Criteria** | **Rating** | **Justification** |
|  |  |  |  |

**Teacher**

|  |  |  |  |
| --- | --- | --- | --- |
| **TeacherID** | **Name** | **Username** | **Password** |
| 1 | Danika McNirlin | dmcnirlin0 | xsy2aela |
| 2 | Carleen Quaife | cquaife1 | m684gvo9 |
| 3 | Yelena Rotchell | yrotchell2 | 67t2i9lg |
| 4 | Alvy Beste | abeste3 | 6ex9nux3 |
| 5 | Burton Collins | bcollins4 | 8jbnb8mq |
| 6 | Selle Battlestone | sbattlestone5 | on5yj1xp |
| 7 | Elena Collacombe | ecollacombe6 | ftjzf5ur |
| 8 | Klemens Alabastar | kalabastar7 | 708gljye |
| 9 | Teirtza Billany | tbillany8 | 7q3du8rv |
| 10 | Agnola Anthes | aanthes9 | dnhccxth |

**Student**

|  |  |  |  |
| --- | --- | --- | --- |
| **StudentID** | **Name** | **Username** | **Password** |
| 1 | Annalee Pusey | apusey0 | cjouyc2b |
| 2 | Germain Woolfitt | gwoolfitt1 | p3dnslpp |
| 3 | Mendel Markey | mmarkey2 | 3pl0zdoz |
| 4 | Jimmie Trumper | jtrumper3 | 2c7qpl5x |
| 5 | Rachael Orbon | rorbon4 | o5g13cr7 |
| 6 | Constantine Vel | cvel5 | 0a36wfht |
| 7 | Vevay Mauger | vmauger6 | zkklejxs |
| 8 | Nikoletta Fewings | nfewings7 | tdwz0vr6 |
| 9 | Pearl Gallahar | pgallahar8 | 3bdbwqk5 |
| 10 | Byrann Buey | bbuey9 | wu8odl9t |

**Subject**

|  |  |  |
| --- | --- | --- |
| **SubjectID** | **Name** | **TeacherID** |
| 1 | English | 1 |
| 2 | Maths | 3 |
| 3 | Science | 3 |
| 4 | Humanities | 9 |

**Enrolment**

|  |  |  |
| --- | --- | --- |
| **SubjectID** | **StudentID** | **Result** |
| 1 | 2 | A |
| 1 | 4 | B |
| 1 | 6 | A |
| 1 | 9 | C |
| 2 | 1 | D |
| 2 | 2 | C |
| 2 | 7 | B |
| 2 | 10 | C |
| 3 | 1 |  |
| 3 | 5 |  |
| 3 | 3 |  |
| 3 | 8 |  |
| 4 | 3 |  |
| 4 | 10 |  |
| 4 | 9 |  |
| 4 | 6 |  |

**create\_database**

|  |  |  |
| --- | --- | --- |
| **Input** | **Process** | **Output** |
|  | **BEGIN create\_database**  **CREATE Teacher TABLE**  **CREATE Subject TABLE**  **CREATE Student TABLE**  **CREATE Enrolment TABLE**  **DISPLAY Successful creation of database**  **END** | Terminal: successful creation of database |

**clean\_data**

|  |  |  |
| --- | --- | --- |
| **Input** | **Process** | **Output** |
| Row read from sources data as a list | **BEGIN clean\_data (data)**  **id = data[0]**  **first\_name = data[1] STRIPSPACE CAPITALISE**  **last\_name = data[2] STRIPSPACE CAPITALISE**  **name = first\_name + last\_name**  **dob = data[3] REPLACE "-" WITH "/"**  **RETURN [id, name, dob]**  **END** | Data in a list ready for insertion |

**insert\_data**

|  |  |  |
| --- | --- | --- |
| **Input** | **Process** | **Output** |
| Cleaned row of data from data source as a list | **BEGIN insert\_data(data)**  **IF data[0] NOT IN Subject**  **INSERT data[0] INTO Subject**  **ENDIF**  **IF data [1] NOT IN Teacher**  **INSERT data[1] INTO Teacher**  **ENDIF**  **FOR index = 0 to LEN(row[2])**  **IF data[2][index] NOT IN Student**  **INSERT data[2][index] IN Student**  **ENDIF**  **INSERT data[0],**  **data[2][index],**  **row[3][index]**  **INTO Enrolment**  **NEXT FOR**  **ENDFOR**  **END** |  |

**retrieve\_results**

|  |  |  |
| --- | --- | --- |
| **Input** | **Process** | **Output** |
| student\_name | **BEGIN retrieve\_results(name)**  **response = RETRIEVE results**  **FROM database**  **WHERE student\_name = name**  **RETURN response**  **END** | response data as a list |

**insert\_new\_user**

|  |  |  |
| --- | --- | --- |
| **Input** | **Process** | **Output** |
| student\_name | **BEGIN insert\_new\_user(first\_name, last\_name)**  **IF first\_name IS NOT ALLALPHA**  **DISPLAY Error with first name**  **ELSEIF last\_name IS NOT ALLALPHA**  **DISPLAY Error with last name**  **ELSE**  **INSERT (first\_name, last\_name)**  **INTO User**  **DIPLAY Record added**  **ENDIF**  **END** | Error with last name  or  Error with last name  or  Record added |

**Product Table**

|  |  |  |  |
| --- | --- | --- | --- |
| **Product ID** | **Details** | **Details** | **Price** |
| 1 | Phone case, iPhone | clear, gold | 24.99 |
| 2 | Phone case, iPhone Pro | white, rose gold | 29.99 |
| 3 | Ear bud case, AirPods | black, gold | 19.99 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Product Table** | | | |  | **Product Colour Table** | |
| **Product ID** | **Type** | **Device** | **Price** |  | **Product ID** | **Colour** |
| 1 | Phone case | iPhone | 24.99 |  | 1 | clear |
| 2 | Phone case | iPhone | 29.99 |  | 1 | gold |
| 3 | Ear bud case | AirPods | 19.99 |  | 2 | white |
|  |  |  |  |  | 2 | rose gold |
|  |  |  |  |  | 3 | black |
|  |  |  |  |  | 3 | gold |

|  |  |  |  |
| --- | --- | --- | --- |
| **Purchase Detail Table** | | | |
| **Customer ID** | **Store ID** | **Date** | **Location** |
| 1 | 1 | 13/04/22 | Mt Gravatt |
| 1 | 3 | 24/04/22 | Strathpine |
| 2 | 1 | 04/05/22 | Mt Gravatt |
| 3 | 2 | 05/05/22 | Carindale |
| 4 | 3 | 16/05/22 | Strathpine |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Purchase Table** | | |  | **Store Table** | |
| **Customer ID** | **Store ID** | **Date** |  | **Store ID** | **Location** |
| 1 | 1 | 13/04/22 |  | 1 | Mt Gravatt |
| 1 | 3 | 24/04/22 |  | 2 | Carindale |
| 2 | 1 | 04/05/22 |  | 3 | Strathpine |
| 3 | 2 | 05/05/22 |  |  |  |
| 4 | 3 | 16/05/22 |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| **Book Detail Table** | | | |
| **Book ID** | **Genre ID** | **Genre Type** | **Price** |
| 1 | 1 | Gardening | 25.99 |
| 2 | 2 | Sports | 14.99 |
| 3 | 1 | Gardening | 10.00 |
| 4 | 3 | Travel | 12.99 |
| 5 | 2 | Sports | 17.99 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Book Details Table** | | |  | **Genre Table** | |
| **Book ID** | **Genre ID** | **Price** |  | **Genre ID** | **Genre Type** |
| 1 | 1 | 25.99 |  | 1 | Gardening |
| 2 | 2 | 14.99 |  | 2 | Sports |
| 3 | 1 | 10.00 |  | 3 | Travel |
| 4 | 3 | 12.99 |  |  |  |
| 5 | 2 | 17.99 |  |  |  |