**Workshop 4**

We, Jimmy, Naman, Md, declare that the attached assignment is our own work in accordance with the Seneca Academic Policy. No part of this assignment has been copied manually or electronically from any other source (including web sites) **or distributed to other students.**

|  |  |  |
| --- | --- | --- |
|  | Name | Task(s) |
| 1 | Jimmy Tran | Created the document and completed the workshop. |
| 2 | Naman Grover | Provided input on the completion of the workshop. |
| 3 | Md Faiaz | Provided input on the completion of the workshop. |

**Question 1**

Command:

CREATE DATABASE clinic;

**Question 2**

Command:

CREATE TABLE Patient(

P\_ID int NOT NULL,

P\_LNAME varchar(20) NOT NULL,

P\_FNAME varchar(20) NOT NULL,

P\_EMAIL varchar(50) UNIQUE,

PRIMARY KEY (P\_ID)

);

**Question 3**

Command:

CREATE TABLE BILL(

BILL\_ID int NOT NULL,

BILL\_TOTAL real NOT NULL CHECK(BILL\_TOTAL > 0),

PRIMARY KEY (BILL\_ID)

);

**Question 4**

Command:

CREATE TABLE PAYMENT(

PAY\_ID int NOT NULL PRIMARY KEY,

PAY\_DATE date NOT NULL,

PAY\_AMOUNT real NOT NULL CHECK(PAY\_AMOUNT > 0),

BILL\_ID int NOT NULL FOREIGN KEY REFERENCES BILL(BILL\_ID),

P\_ID int NOT NULL FOREIGN KEY REFERENCES PATIENT(P\_ID)

);

**Question 5**

Graphical user interface

Description automatically generated

**Question 6**

Command:

INSERT INTO PATIENT VALUES

(10011, 'Dunne', 'Leonna', 'dunne.leonna@gmail.com'),

(10012, 'Smith', 'Kathy', 'Smith.k@gmail.com'),

(10013, 'Ramas', 'Alfred', 'Ramas.Alfred@gmail.com');

Output:

SELECT \* FROM PATIENT;

|  |  |  |  |
| --- | --- | --- | --- |
| P\_ID | P\_LNAME | P\_FNAME | P\_EMAIL |
| 10011 | Dunne | Leonna | dunne.leonna@gmail.com |
| 10012 | Smith | Kathy | Smith.k@gmail.com |
| 10013 | Ramas | Alfred | Ramas.Alfred@gmail.com |

**Question 7**

Command:

INSERT INTO BILL VALUES

(100, 5000),

(101, 3000),

(103, 1000);

Output:

SELECT \* FROM BILL;

|  |  |
| --- | --- |
| BILL\_ID | BILL\_TOTAL |
| 100 | 5000 |
| 101 | 3000 |
| 103 | 1000 |

**Question 8**

Command:

INSERT INTO PAYMENT VALUES

(5000, '2020-10-1', 1000.55, 100, 10011),

(5001, '2020-11-1', 1125.5, 100, 10011),

(5002, '2020-12-1', 1000, 100, 10011),

(5003, '2020-10-1', 500, 101,10012),

(5004, '2020-11-1', 750, 101, 10012)

Output:

SELECT \* FROM PAYMENT;

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| PAY\_ID | PAY\_DATE | PAY\_AMOUNT | BILL\_ID | P\_ID |
| 5000 | 2020-10-01 | 1000.55 | 100 | 10011 |
| 5001 | 2020-11-01 | 1125.5 | 100 | 10011 |
| 5002 | 2020-12-01 | 1000 | 100 | 10011 |
| 5003 | 2020-10-01 | 500 | 101 | 10012 |
| 5004 | 2020-11-01 | 750 | 101 | 10012 |

**Question 9**

INSERT INTO Patient VALUES

(10011, 'Brown', 'James', 'Brown.James@gmail.com');

**Error Message:**

Violation of PRIMARY KEY constraint 'PK\_\_Patient\_\_A3420A7709C18DD8'. Cannot insert duplicate key in object 'dbo.Patient'. The duplicate key value is (10011).

The statement has been terminated.

**Answer:** Primary keys must be unique values, in this case there is already a P\_ID with value 10011. So you must use a different P\_ID for this insert.

**Question 10**

INSERT INTO Patient VALUES

(10014, 'Brown', 'James', 'dunne.leonna@gmail.com');

**Error Message:**

Violation of UNIQUE KEY constraint 'UQ\_\_Patient\_\_D60938909609D99F'. Cannot insert duplicate key in object 'dbo.Patient'. The duplicate key value is (dunne.leonna@gmail.com).

The statement has been terminated.

**Answer:** When creating the table, a constraint defined by the creator was used to make email entries unique. So, a different email must be used for this insert.

**Question 11**

INSERT INTO PAYMENT VALUES

(5005, '2020-10-1', -800, 100, 10011);

**Error Message:**

The INSERT statement conflicted with the CHECK constraint "CK\_\_PAYMENT\_\_PAY\_AMO\_\_36B12243". The conflict occurred in database "clinic", table "dbo.PAYMENT", column 'PAY\_AMOUNT'.

The statement has been terminated.

**Answer:** This constraint was defined so that a PAY\_AMOUNT must be >0. So for this insert to be successful all values for PAY\_AMOUNT must be positive.

**Question 12**

INSERT INTO PAYMENT VALUES

(5005, '2020-10-1', 800, 104, 10011);

**Error Message:**

The INSERT statement conflicted with the FOREIGN KEY constraint "FK\_\_PAYMENT\_\_BILL\_ID\_\_37A5467C". The conflict occurred in database "clinic", table "dbo.BILL", column 'BILL\_ID'.

The statement has been terminated.

**Answer:** For this insert the error occurred due to inserting a foreign key that does not exist in the referenced table. The BILL\_ID 104 does not exist in the BILL table, so an error occurs. To fix this insert a value that does exist.

**Screenshots from MSMM**

Question 1

Graphical user interface, text, application

Description automatically generated

Question 2

Graphical user interface, text, application

Description automatically generated

Question 3

Graphical user interface, text, application

Description automatically generated

Question 4

Graphical user interface, text, application

Description automatically generated

Question 5

Graphical user interface

Description automatically generated

Question 6

Text

Description automatically generated with medium confidence

Question 7

Table

Description automatically generated with medium confidence

Question 8

Table

Description automatically generated with medium confidence

Question 9

Graphical user interface, application

Description automatically generated

Duplicate primary keys are not allowed

Question 10

Application

Description automatically generated with low confidence

Constraint in patient allows only unique EMAILS

Question 11

Graphical user interface, application

Description automatically generated

Question 12

Graphical user interface

Description automatically generated with low confidence