

1 Question Ans :

-- A. Making A Library Table --

```
CREATE TABLE student
(
  Roll CHAR(6) PRIMARY KEY,
  Name VARCHAR(20),
  Depertment VARCHAR(20),
  session CHAR(4),
  Phone CHAR(11),
  Email VARCHAR(50),
  Constraint valid_email CHECK(Email LIKE '%@%.com')
);
INSERT INTO student(roll,name,department,session,phone,email)
VALUES(670029,'AN Mamun','CSE','2024','01782059949','almamun20044@gmail.com');
```

```
INSERT INTO student
VALUES(670030,'Sohan','CSE','2024','01712345678','almamun20044@gmail.com'),
(670031,'Sohan','CSE','2024','01712345678','sohan@gmail.com'),
(780001,'Sami','EEE','2024','01712345678','sami@yeahoo.com'),
(900001,'Ashik','Civil','2024','01712345678','ashik@gmail.com'),
(670032,'Ridoy','CSE','2024','01712345678','ridoy@phitron.com'),
(780002,'Jon','EEE','2024','01712345678','jon@gmail.com');
```

-- B. Making Library Table --

```
CREATE TABLE library
(
  Book VARCHAR(50) PRIMARY KEY,
  Who_Hire_Roll CHAR(6),
  Purchase DATE,
  Department VARCHAR(20),

  constraint Buy_Book_Rules FOREIGN KEY(Who_Hire_Roll) REFERENCES student(Roll)
);
INSERT INTO library(book,who_hire_roll,purchase,deperment)
VALUES('C Language',670029,CURRENT_DATE(),'CSE'),
('C++ Language',670029,CURRENT_DATE(),'CSE'),
('Algorithms',670029,CURRENT_DATE(),'CSE'),
('MicroController',780002,CURRENT_DATE(),'EEE');
```

-- C. Making Fees Table --

CREATE TABLE Fees

```
(  
  Book VARCHAR(50) PRIMARY KEY,  
  Who_buy CHAR(6),  
  Fee INT,  
  Buy_date DATE,  
  Constraint Available_in_Library FOREIGN KEY(Book) REFERENCES library(Book)  
);
```

```
INSERT INTO fees (book, who_buy,fee,buy_date)  
VALUES ('C Language',670029,100,CURRENT_DATE()),  
('C++ Language',670029,100,CURRENT_DATE()),  
('Algorithms',670029,400,CURRENT_DATE()),  
('MicroController',780002,600,CURRENT_DATE());
```

2 Question Ans : Done, Added proper constraint on the TABLE of the student;
PRIMARY KEY, VARCHAR, CHECK, DATE, CHAR

3 Question Ans :

Data	Information
Unprocessed context	Process context
Image, text, number, etc, unstructured data	If we process DATA then we will archive information.

4 Question Ans :

In MySQL not normally execute update and delete because SQL checks my action is intentional or not, That why we use **SQL_SAFE_UPDATES = 0**;

SQL_SAFE_UPDATES prevent unintentional update or delete,

If we can enable the option :

SQL Code : **SET SQL_SAFE_UPDATES = 0**;

If we can unable the option :

SQL Code : **SET SQL_SAFE_UPDATES = 1**;

5 Question Ans :

```
SELECT DISTINCT department FROM employee;
```

6 Question Ans :

```
SELECT lastname FROM employee  
ORDER BY age DESC;
```

7 Question Ans :

```
SELECT lastname FROM employee  
WHERE age>30 AND department='marketing';
```

8 Question Ans :

```
SELECT * FROM employee;
```

9 Question Ans :

```
SELECT * FROM employee  
WHERE lastname LIKE '%son%';
```

10 Question Ans :

```
SELECT *FROM employee  
WHERE department='engineering';
```