ASSIGNMENT-3

1)Perform all the necessary steps to Implement 1NF

First Normal Form (1NF):

1. There are only Single Valued Attributes.
2. Attribute Domain does not change.
3. There is a unique name for every Attribute/Column.
4. The order in which data is stored does not matter

```
ID  Name  Courses
------------------
1   A     c1, c2
2   E     c3
3   M     c2, c3
```

In the above table, Course is a multi-valued attribute so it is not in 1NF.

Below Table is in 1NF as there is no multi-valued attribute:

```
ID  Name  Course
------------------
1   A     c1
1   A     c2
2   E     c3
3   M     c2
3   M     c3
```

2)Perform all the necessary steps to Implement 2NF

Second Normal Form (2NF):

1. It should be in First Normal Form.
2. Removal of Partial dependencies.

STUD_NO	COURSE_NO	COURSE_FEE
1	C1	1000
2	C2	1500
1	C4	2000
4	C3	1000
4	C1	1000
2	C5	2000

To convert the above relation to 2NF,
we need to split the table into two tables such as :
Table 1: STUD_NO, COURSE_NO
Table 2: COURSE_NO, COURSE_FEE

Table 1:

STUD_NO	COURSE_NO
1	C1
2	C2
1	C4
4	C3
4	C1
2	C5

Table 2:

COURSE_NO	COURSE_FEE
C1	1000
C2	1500
C3	1000
C4	2000
C5	2000

3)Perform all the necessary steps to Implement 3NF

1.Should be in Frist and Second Normal Form.

2. All non-primary-key attributes are transitively depend on Primary-key

  Attributes

Table 1:

STUD_NO	COURSE_NO
1	C1
2	C2
1	C4
4	C3
4	C1
2	C5

Table 2:

COURSE_NO	COURSE_FEE
C1	1000
C2	1500
C3	1000
C4	2000
C5	2000