**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

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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

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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