**ASSIGNMENT 4**

**Q1. What is ER-DIAGRAM**

Er-Diagram stand for entity relationship diagram also know as ERD is a diagram that show the relationship of entity sets stored in a database.in other word er diagram help to explain the logical structure of database.er diagram is created on the bases of entities, attributes and relationships

**Collage Management System Er-Diagram**



**FIG 1**

Er diagram contain different shapes and symbols like:

1. rectangle represent entities like Student entities 
2. ovals represents attributes 
3. Diamond shapes represent relationship 
4. it represent primary key attribute
5. it represent multivalued attribute it mean that student has more than one phone number
6. attribute that can be split into components is a composite attribute
7. the attribute that can be derived from other attributes is derived attribute example total and average marks of a student

IN Fig 1 their is 7 enties (Student, Faculty, Cource, Hostel, Exam, Department, Subject) and every entities has some attribute and relationship (onetoone, onetomany, manytoone, manytomany)

1) Student has Many-To-One Relationship with Hostel and student has 5 attribute(Name, Phone\_Number, DOB, Address, S\_ID)

2)Hostel has One\_to\_Many Relationship with student and Hostel has 3 attribute(Hostel\_id, Hostel\_Name, No\_of\_Seats)

3)Faculty has One\_to\_Many Realtionship with Student and Faculty has 4 attribute(Salary, Department, Name, Phone\_Number)

4)Cource has Many\_to\_Many relationship with student and Cource has 3 attribute(Cource\_Id, Cource\_Name, Duration)

5)Exam has Many\_to\_One relationship with Department and Exam has 4 attribute(Room, Date, Time, Code)

6)Department has One\_to\_Many relation with Exam and Department has 2 attribute(Department\_Name,Department\_Id)

7) Subject has Many\_to\_One relationship with Faculty and Subject has 2 attribute(Subject\_Id, Subject\_Name)