Zagdu Singh Charitable Trust's (Regd.)
THAKUR SPECIALIZED DEGREE COLLEGE
Approved by Government of Maharashtra, Affiliated to University of Mumbai
Shivaji Road, off. M.G. Road, Kandivali (West), Mumbai - 400 067.
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Name :- SIMRAN · S· GUPTA
Roll no :- 11
Department :- BSC.IT
Subject :- DBMS

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Practical no 1

Conceptual Designing using ER diagrams (Identifying entities, attributes, keys and relationships between entities, cardinalities, generation, specialization etc.)

- An entity can be a real-world object, that exist either animate or inanimate, that can be easily identifiable.

- Rectangles represent relationship entity sets.
- Diamonds represent relationship sets.
- Lines link the attributes to entity sets and entity sets to relationship sets.
- Underline indicates primary key attributes.
- Ellipse represent an attributes.
- Double lines represent total participation of an entity in a relationship sets.

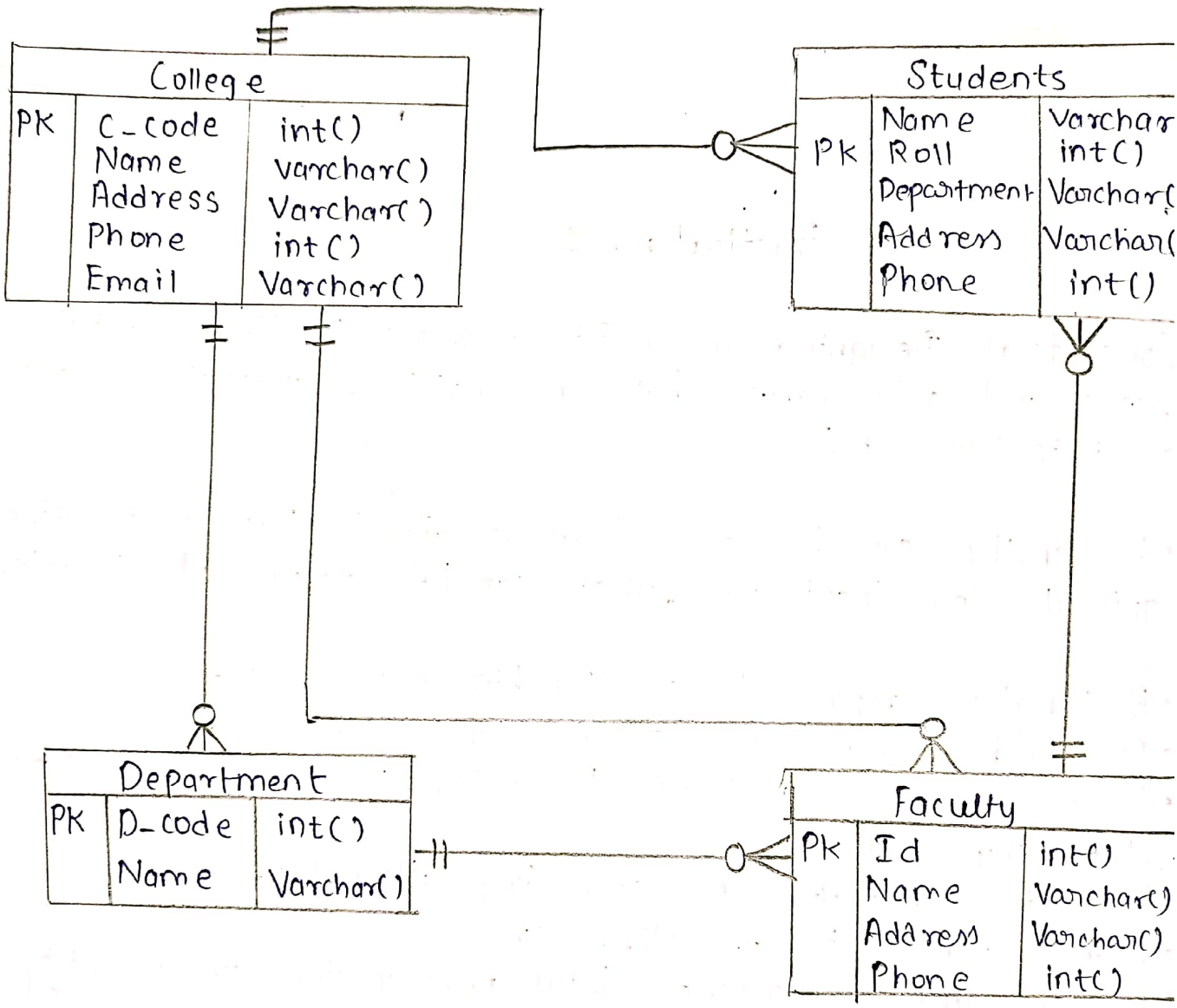
Attributes

- Properties of an entity or relationship type is called as attributes

- Example Staffno., staffname, staff-designation describes an entity staff.

Relationships.

- The association among entities is called as relationship
- We used diamond symbol to indicate Relationship amongseveral entities



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Types of relationship

(1) One-to-one

- In this type of Mapping Constrant One record of an entity is related to the one record of an another entity. That is one row of table is related to one row of another table.
- i.e A is associated with at most one entity in B and B is associated with at most one entity in A.

Example

- Each branch is managed by one member of the staff that's means Branch Manager.
- A member of staff can manage zero or one branch.

(2) One-to-many

- In this constraint, One record in the entity can be related with many record in entity. A is associated with any number of entities in B whereas B is associated with at most one entity in A.
- E.g. each member of staff oversees zero or more prosperity forrent.
- Every row in the staff table can have relationship with many rows in the "Property for Rent' Table.

(3) Many to one

- In this Mapping Constraint, Many records of one entity are related to only a single record in the other entity.
- Here, an entity in A is associated with at least one entity in B whereas an entity in B can be associated with any number of entities in A.
- Example one vendors has many Goods and Many Goods is purchase by one Vendors.

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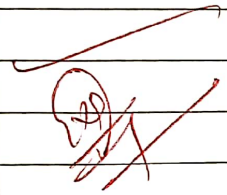
(4) Many to Many

- In this Mapping Constraints, Many records in one entity is related to Many records in the other entity.
- An entity in A is associated with any numbers of entities in B. and an entity in B is associated with any number of entities in A.
- Many vendors Has many Clients and Many Clients has many Vendors.



Output

Create database

Roll_no	Name	Address	Phone	Email

Insert into

Roll_no	Name	Address	Phone	Email
101	Ajay	Los Angles	6543576 46	ajay101@gmail.com
102	Suman	Matheran	235676327	suman102@gmail.com
103	Kritik	Mira road	21443568 9	kritik103@gmail.com
104	Varsha	Santacruz	109854867	varsha104@gmail.com
105	Satendra	Bandra	28465356	sattu105@gmail.com

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▶ Practical 2 : Perform the following

- Viewing all databases
- Creating a Database
- Viewing all Tables in a Database
- Creating Tables (with and without constraints)
- Inserting / Update / Deleting Records in a Table

1. create database college7;
2. use college 7;
3. Create table student (Roll_no int(10), Name varchar(50), Address varchar(100), Phone int(10), Email varchar(50));
4. select * from students

5. Insert into student value (101, 'Ajay', 'Los Angles', 65435 7646, 'ajay101@gmail.com');
6. Insert into student value (102, 'Suman', 'Matheran', 235676327, 'suman102@gmail.com');
7. Insert into student value (103, 'Kritik', 'Mira road', 214435689, 'kritik103@gmail.com');
8. Insert into student value (104, 'Varsha', 'Santacruz', 108954867, 'varsha104@gmail.com');
9. Insert into student value (105, 'Satendra', 'Bandra', 28465356, 'sattu105@gmail.com');

Output

Update

	Roll_no	Name	Address	Phone	Email
▶	101	Ajay	Kandivali	654357646	ajay101@gmail.com
	102	Prince	Matheran	235676327	suman102@gmail.com
	103	Kritik	Mira road	214435689	kritik 103@gmail.com
	104	Varsha	Santacruz	109854867	Varsha104@gmail.com
	105	Satendra	Bandra	28465356	sattu105@gmail.com

Delete

	Roll_no	Name	Address	Phone	Email
▶	101	Ajay	Kandivali	654357646	ajay101@gmail.com
	103	Kritik	Mira road	235676327	Kritik 103@gmail.com
	104	Varsha	Santacruz	109854867	Varsha104@gmail.com
	105	Satendra	Bandra	28465356	sattu105@gmail.com

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10. update student set Name = "Prince" where Roll_no = 102;

11. update student set Address = 'kandivali' where Roll_no = 101;

12. delete from student where roll_no = 102;

Alter

	RollNo	Name	Phone	Email	Salary
▶	101	Ajay	654357646	ajay101@gmail.com	NULL
	103	kritik	214435689	kritik103@gmail.com	NULL
	104	Varsha	109854867	varsha104@gmail.com	NULL
	105	Satendra	28465356	sattu105@gmail.com	NULL

Truncate

	Roll_No	Name	Phone	Email	Salary

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Practical 3: Perform the following:-
- Altering a Table
- Dropping / Truncating / Renaming Tables.
- Backing up / Restoring a Database

```
alter table student rename employee;
alter table employee add salary int(20);
select * from employee;
alter table employee drop Address;
```

```
truncate table employee;
```

```
drop table employee;
```

	min (salary)
▷	65000

	max (salary)
▷	120000

	avg (salary
▷	88600.0000

	sum(salary)
▷	443000

	Count(Name)
▷	5

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Practical 4

Aim : Perform the following
Simple queries
Simple queries with aggregate function

Syntax

E-Id	Name	Address	Phone	Salary
1001	Rahul	Varanasi	87845544	78000
1002	Rakesh	Pune	8321654	65000
1003	Priyanka	Kolkata	7321326	85000
1004	Suman	Mumbai	3210427	95000
1005	Riya	Delhi	9934260	120000

- Select min(salary) from Employee 1;
- Select max(salary) from Employee 1;
- Select avg(salary) from Employee 1;
- Select sum(salary) from Employee 1;
- Select count(Name) from Employee 1;

	now()
▷	2024-09-13 09:56:26

	current_Date-Time
	2024-09-13 09:58:21

	current_data()
	2024-09-13

	current_time()
	10:00:59

	show_date
	2022-10-20

	show year
	2022

	show.month
	10

	show_day
	20

	show_time
	18:28:45

	show_hour
	18

	show_min
	28

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Practical 5

Aim : Perform the following
Queries functions
Data functions
String functions
Math functions.

Syntax

- select now;
- select now() as current_Date_Time;
- Select curdate();
- Select current_date();

- Select curtime();
- Select current_~~date~~time();

- Select date("2022-11-10 18:28:45") as show_date;
- Select extract(Year from "2022-11-10") as show_year;
- Select extract(Month from "2022-11-10") as show_month;
- Select extract(Day from "2022-11-10") as show_day;
- Select time("18:28:45") as show_time;
- Select extract(Hour from "18:28:45") as show_hour;
- Select extract(Minute from "18:28:45") as show_minute;
- Select extract(Second from "18:28:45") as show_second;

- Select date_add("2024-09-12" interval 15 Day) as new_date;
- Select date_sub("2024-09-12" interval 10 Day) as new_date;