

R.V. COLLEGE OF ENGINEERING

OBSERVATION / DATA SHEET

Date _____ Name ANUSHA MANTUNATH RAYKAR

Dept./Lab DBMS Class MCA-I Expt./No. 03

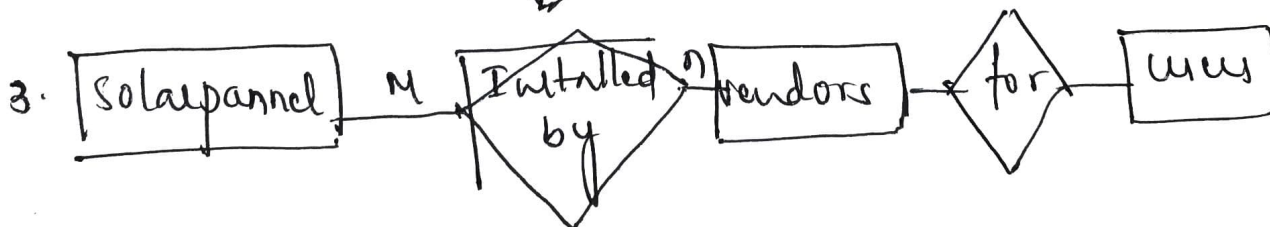
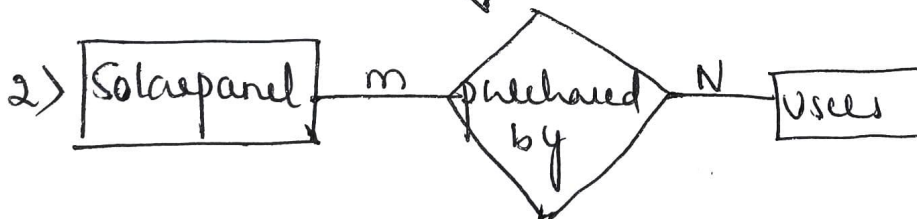
Title Solar-panel database

Identified Entities and Attributes:-
(photovoltaic)

- 1) solar panel → Capacity, PV-module, ~~price~~, pv-type, Capacity.
- 2) Distributor (vendors) → Tin, name, address, contact details (vendors)
- 3) User → name, area, build-up (building no)

Relationships and cardinalities:-

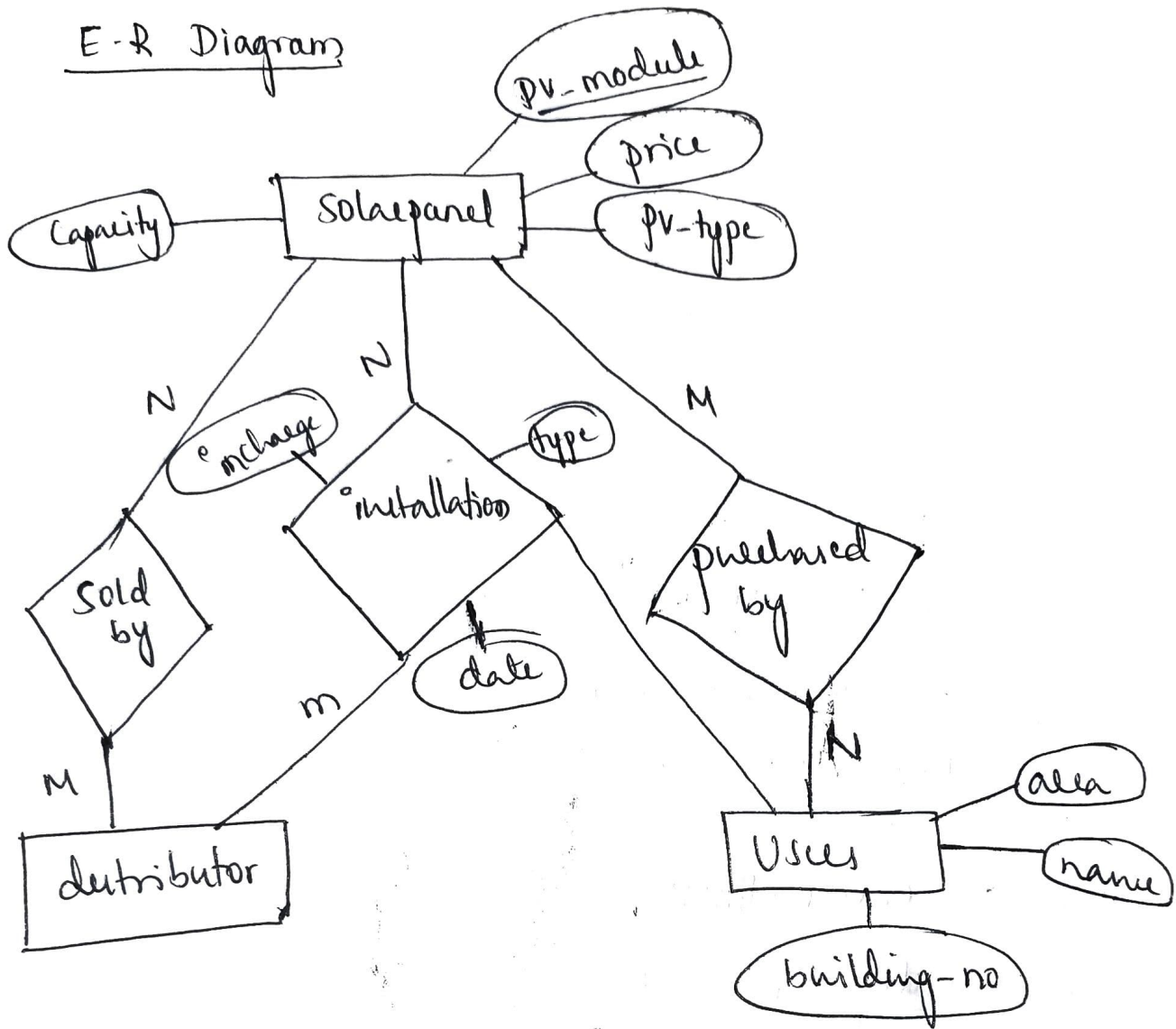
- 1) Solarpanel sold by Distributors



Signature of
Teacher incharge

Signature of

E-R Diagram



R.V. COLLEGE OF ENGINEERING

OBSERVATION / DATA SHEET

Date _____ Name _____

Dept./Lab _____ Class _____ Expt./No. _____

Title _____

Schema diagram:-

Solar-panel:

Pv-module	capacity	price	Pv-type
-----------	----------	-------	---------

distributor:

Tin	name	address	Contact
-----	------	---------	---------

Users:

buil-no	name	area
---------	------	------

Sold-by

V-Tin	Pv-module
-------	-----------

purchased by

buil-no	Pv-module
---------	-----------

installation

Pv-module	buil-no	Tin	in charge	date	type
-----------	---------	-----	-----------	------	------

Signature of
Teacher incharge

```
Database changed
MariaDB [lab2]> select * from purchase;
```

pv_module	building_no
p10	b10
p11	b10
p11	b11
p11	b12
p11	b14
p12	b11
p12	b14
p13	b14

```
8 rows in set (0.00 sec)

MariaDB [lab2]> select * from solar_panel;
```

pv_module	installation_charge	sp_type	capacity
p10	20000	mono	20
p11	21000	poly	11
p12	25000	mono	12
p13	27000	poly	15
p14	3000	mono	16

```
5 rows in set (0.00 sec)
```

```
MariaDB [lab2]> select * from installation;
```

tin	pv_module	building_no	idate	charge	ptype
t10	p10	b10	2020-02-02	20000	domestic
t10	p11	b10	2020-02-02	21000	domestic
t11	p11	b11	2020-02-02	21000	commercial
t11	p11	b14	2020-02-02	21000	commercial
t11	p12	b11	2020-02-02	25000	domestic
t11	p12	b12	2020-02-02	21000	commercial

```
6 rows in set (0.00 sec)
```

Activities Terminal Tue 18:08 anusha@anusha: ~

```
File Edit View Search Terminal Help

MariaDB [lab2]> select * from user;
```

building_no	name	address
b10	raj	soraba
b11	raj	soraba
b12	indhu	sirsi
b13	shreya	sirsi
b14	narayan	sagar
b15	Raghu	bangalore

```
6 rows in set (0.01 sec)

MariaDB [lab2]> select * from vendor;
```

tin	name	address	phoneno
t10	shreyas	banglore	7893747377
t11	kiran	banglore	7893747377
t12	kiran	sagar	7893747377
t13	sindu	sagar	7893747377
t14	krishna	mysore	7893747377

```
5 rows in set (0.00 sec)

MariaDB [lab2]> select * from sales;
```

tin	pv_module	quantity
t10	p10	5
t10	p11	1
t10	p13	11
t11	p11	1
t12	p11	3
t13	p12	1

```
6 rows in set (0.00 sec)
```

QUERIES:

1)list the vendors with most installation in domestic places

select v.name,count(v.tin) from vendor v, installation i where i.tin=v.tin and i.ptype="domestic" group by v.tin order by max(v.tin);

```
MariaDB [lab2]> select v.name,count(v.tin) from vendor v, installation i where i.tin=v.tin and i.ptype="domestic" group by v.tin order by max(v.tin);
+-----+
| name | count(v.tin) |
+-----+
| shreyas | 2 |
| kiran | 1 |
+-----+
2 rows in set (0.05 sec)
```

2)list the place name with highest capacity panel installed

select distinct u.address,u.building_no from user u,solar_panel p,installation i where u.building_no=i.building_no and p.pv_module=i.pv_module and p.sp_type="mono";

```
MariaDB [lab2]> select distinct u.address,u.building_no from user u,solar_panel p,installation i where u.building_no=i.building_no and p.pv_module=i.pv_module and p.sp_type="mono";
+-----+-----+
| address | building_no |
+-----+-----+
| soraba | b10 |
| soraba | b11 |
| sirsi | b12 |
+-----+-----+
3 rows in set (0.00 sec)
```

3)display the area where monocrystalline pannelsa are installed

select u.address from user u,solar_panel p,installation i where u.building_no=i.building_no and p.pv_module=i.pv_module and p.capacity=(select max(capacity) from solar_panel);

```
MariaDB [lab2]> select u.address from user u,solar_panel p,installation i where u.building_no=i.building_no and p.pv_module=i.pv_module and p.capacity=(select max(capacity) from solar_panel);
+-----+
| address |
+-----+
| soraba |
+-----+
1 row in set (0.01 sec)
```

4)list the place where both type of panels are installed and calculate the installation charges

```
unknown [lab2]> select u.address,sum(i.charge) from user u, installation i, solar_panel s where u.building_no=i.building_no and s.pv_module=i.pv_module and s.sp_type="poly" and exists(select u.address from user u, installation i, solar_panel s where u.building_no=i.building_no and s.pv_module=i.pv_module and s.sp_type="mono") group by address;
No connection. Trying to reconnect...
Connection id: 2
Current database: lab2

+-----+-----+
| address | sum(i.charge) |
+-----+-----+
| sagar | 21000 |
| soraba | 42000 |
+-----+-----+
2 rows in set (0.00 sec)
```

5)list the details of vendor and panel that is the oldest installation

select v.*,s.*,i.idate from vendor v, solar_panel s, installation i where v.tin=i.tin and s.pv_module=i.pv_module and i.idate in(select min(idate) from installation);

```
MariaDB [lab2]> select v.*,s.*,i.idate from vendor v, solar_panel s, installation i where v.tin=i.tin and s.pv_module=i.pv_module and i.idate
in(select min(idate) from installation);
```

tin	name	address	phoneno	pv_module	installation_charge	sp_type	capacity	idate
t10	shreyas	banglore	7893747377	p10	20000	mono	20	2020-02-02
t10	shreyas	banglore	7893747377	p11	21000	poly	11	2020-02-02
t11	kiran	banglore	7893747377	p11	21000	poly	11	2020-02-02
t11	kiran	banglore	7893747377	p11	21000	poly	11	2020-02-02
t11	kiran	banglore	7893747377	p12	25000	mono	12	2020-02-02
t11	kiran	banglore	7893747377	p12	25000	mono	12	2020-02-02

```
6 rows in set (0.00 sec)
```

6)find the average sales of both type of panels in only commercial places
select d.sp_type,avg(d.charge) from (select a.*,b.capacity,c.address,b.sp_type from
installation a
inner join solar_panel b on a.pv_module=b.pv_module inner join user c on
c.building_no=a.building_no where a.ptype="commercial")as d GROUP by d.sp_type;

```
MariaDB [lab2]> select d.sp_type,avg(d.charge) from ( select a.*,b.capacity,c.address,b.sp_type from installation a inner join solar_panel b
on a.pv_module=b.pv_module inner join user c on c.building_no=a.building_no where a.ptype="commercial")as d GROUP by d.sp_type;
```

sp_type	avg(d.charge)
mono	21000.0000
poly	21000.0000

```
2 rows in set (0.00 sec)
```