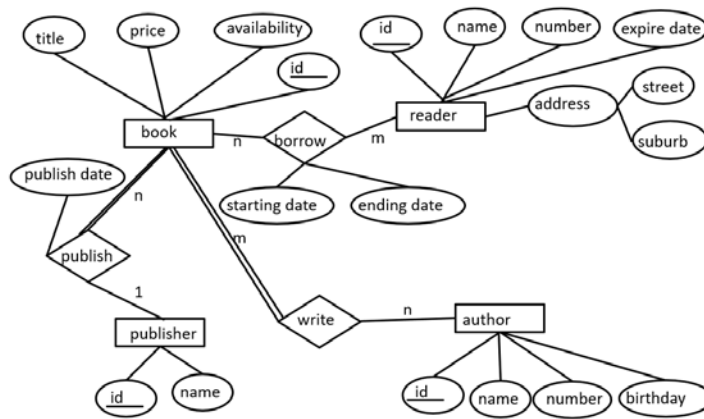


1.



2.

1) 8

```

1 select count(distinct r.id)
  from ROOMS as r inner join BUILDINGS as b on r.building = b.id
3 where b.name = "Computer Science Building" and r.capacity >= 20;

```

count(distinct r...

8

2)

select s.id, s.phone  
from Staff as s, Rooms as r, Buildings as b

where s.office = r.id and r.building = b.id and b.name = "Biological Sciences Building";

```
1 select s.id, s.phone
2 from Staff as s, Rooms as r, Buildings as b
3 where s.office = r.id and r.building = b.id and b.name = "Biological Sciences Building";
```

id	phone
5033223	93852506
5033454	93852604
5033462	93858714
5033552	93853328
5033678	93854087
5033745	93852357
5033802	93821862
5033880	93823711
5033981	62688188

3)

```
select r.building, b.name, count(distinct r.id)
from rooms as r, buildings as b
where r.building = b.id
group by r.building;
```

```
1 select r.building, b.name, count(distinct r.id)
2 from rooms as r, buildings as b
3 where r.building = b.id
4 group by r.building;
```

building	name	count(distinct r.id)
100	Computer Science	78
101	Mechanical Engin	39
102	Chemical Science	35
103	Biomedical Theat	6
104	Civil Engineering	10
105	Australian School	35
106	Central Lecture B	14
107	Electrical Engineer	51
108	John Goodsell Bu	18
110	Library Stage 2	20
111	Mathews Building	56
112	Morven Brown Bu	41
114	Newton Building	2
115	Old Main Building	47
116	Quadrangle	42
117	Red Centre	49
118	Rupert Myers Bul	18
119	Samuels Building	16
120	Valentine Annex	2
121	Robert Webster B	40
122	Materials Science	8
123	Biological Scieno	26
124	Brookhouse	3
125	The Chancellery	16
126	Dalton Building	3
128	John Niland Scie	6
129	Metallurgy Proce	6
131	Petroleum Engine	5
132	Roundhouse	1
133	Squarehouse	15
134	Willis Annex	4
155	223 Andros Parade	1
156	Australian Graduat	3
158	Lee Building	24
159	Library	22
160	Lewy Cancer Res	5
163	Sam Cracknell Pl	1
164	Wallace Wurth Bu	28
167	Goldstein College	8
168	Clancy Auditorium	1
170	JO Myers Studio	1

4)

```
select name
from Rooms
where capacity > (select avg(capacity) from Rooms);
```

```

10 select name
   from Rooms
12 where capacity > (select avg(capacity) from Rooms);

```

name
Seminar Room
Matthews Theatre A
Matthews Theatre B
Matthews Theatre C
Matthews Theatre D
New South Global Theatre
OMB-27
OMB-31
QUAD-1042
E8-219
Electrical Engineering G24
Electrical Engineering G25

3.

1) DFS traversal:  $v_0 - v_1 - v_5 - v_2 - v_4 - v_8 - v_7 - v_9 - v_6 - v_3$

2) BFS traversal:  $v_0 - v_1 - v_3 - v_5 - v_6 - v_2 - v_4 - v_7 - v_9 - v_8$