



SQL Language

Queries in SQL

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Exercise n.1

MAGAZINE (MId, MName, Publisher)

ARTICLE (AId, Title, Topic, MId)

- Find the identifiers and the names of the magazines that have published at least one article about motorcycles

```
SELECT DISTINCT M.MID, MName
FROM MAGAZINE M, ARTICLE A
WHERE M.MID=A.MID AND Topic ='Motorcycle'
```

```
-- add comment in a single line
/* COMMENTS in MANY LINES */
```

Exercise n.2

MAGAZINE (MId, MName, Publisher)

ARTICLE (AId, Title, Topic, MId)

- Find the identifiers and the names of the magazines that publish articles about motorcycles or cars

```
SELECT DISTINCT M.MID, MName
FROM MAGAZINE M, ARTICLE A
WHERE M.MID=A.MID AND
      ( Topic ='Cars' OR Topic ='Motorcycle' )
```

Exercise n.3

MAGAZINE (MId, MName, Publisher)

ARTICLE (AId, Title, Topic, MId)

- Find the identifiers, the name and the publisher of the magazines that have published at least two articles about motorcycles

```
SELECT M.MID, MName, Publisher
FROM MAGAZINE M, ARTICLE A
WHERE M.MID=A.MID AND Topic ='Motorcycle'
GROUP BY M.MID, Mname, Publisher
HAVING COUNT (*) >=2
```

Exercise n.4

MAGAZINE (MId, MName, Publisher)

ARTICLE (AId, Title, Topic, MId)

- Find the identifiers and the names of the magazines that have published only one article about motorcycles (i.e., they may have published any articles about other topics)

```
SELECT M.MID, MName
FROM MAGAZINE M, ARTICLE A
WHERE M.MID=A.MID AND Topic = 'Motorcycle'
GROUP BY M.MID, Mname
HAVING COUNT (*) = 1
```

Exercise n. 5

- Given the relational schema including the following tables (primary keys are underlined)

SAILOR (SId, SName, Expertise, DateofBirth)

BOOKING (SId, BId, Date)

BOAT(Bid, BName, Color)

- Find the IDs and the names of the sailors who have booked a red boat or a green boat

```
SELECT DISTINCT S.SID, SName
FROM SAILOR S, BOOKING BK, BOAT B
WHERE B.Bid=BK.Bid AND S.Sid=BK.Sid AND
      (Color='red' OR Color='green')
```

Exercise n. 6

SAILOR (SId, SName, Expertise, DateofBirth)

BOOKING (SId, BId, Date)

BOAT(Bid, BName, Color)

- ⇒ Find the IDs and the names of the sailors who have booked at least two boats

```
SELECT S.SID, SName
FROM SAILOR S, BOOKING BK
WHERE S.Sid=BK.Sid
GROUP BY S.SID, SName
HAVING COUNT(DISTINCT Bid)>=2
```


Exercise n. 7

SAILOR (SId, SName, Expertise, DateofBirth)

BOOKING (SId, BId, Date)

BOAT(Bid, BName, Color)

- Find the IDs and the names of the sailors who have performed three bookings

```
SELECT S.SID, SName
FROM SAILOR S, BOOKING BK
WHERE S.Sid=BK.Sid
GROUP BY S.SID, SName
HAVING COUNT(*) =3
```


Exercise n. 8

AIRCRAFT (AId, AName, MaximumRange)

CERTIFICATE (AId, PId)

PILOT(PId, PName, Salary)

- Find the IDs and the names of the pilots who are qualified to fly on an aircraft that can cover distances greater than 5,000 km (MaximumRange >= 5,000)

```
SELECT DISTINCT PNAME, P.PID
FROM AIRCRAFT A, CERTIFICATE C, PILOT P
WHERE A.AID=C.AID AND C.AID=P.PID
AND MaximumRange >= 5,000
```

Exercise n.9

AIRCRAFT (AId, AName, MaximumRange)

CERTIFICATE (AId, PIId)

PILOT(PIId, PName, Salary)

- ⇒ Find the IDs and the names of the pilots who are qualified to fly on at least two aircrafts that can cover distances greater than 5,000 km (MaximumRange ≥ 5,000)

```
SELECT P.PID, PName
FROM AIRCRAFT A, CERTIFICATE C, PILOT P
WHERE A.AID=C.AID AND C.PID=P.PID
      AND MaximumRange >= 5,000
GROUP BY P.PID, PName
HAVING COUNT(*) >=2
```