# SQL MINI PROJECT - 1

## Database

QUERY:  SELECT * FROM CARS;

| name | year | selling_price | km_driven | fuel | seller_type | transmission | owner | mileage | engine [CC] | max_power | seats |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hyundai i20 Asta 1.2 | 2007 | 550000 | 2360457 | Petrol | Individual | Manual | Second Owner | 18.6 | 1197 | 81.83 | 5 |
| Maruti Wagon R LXI Minor | 2010 | 194000 | 577414 | Petrol | Individual | Manual | Second Owner | 18.9 | 1061 | 67 | 5 |
| Maruti Wagon R VXI BS IV | 2011 | 229999 | 500000 | Petrol | Individual | Manual | Second Owner | 18.9 | 998 | 67.1 | 5 |
| Maruti Wagon R LXI BS IV | 2012 | 220000 | 360003 | Petrol | Individual | Manual | Second Owner | 18.9 | 998 | 67.1 | 5 |
| Hyundai Sonata 2.4 GDi MT | 2012 | 550000 | 330000 | Petrol | Individual | Manual | Second Owner | 13.44 | 2359 | 198.25 | 5 |
| Hyundai Sonata 2.4 GDi MT | 2012 | 500000 | 330000 | Petrol | Individual | Manual | Manual Owner | 13.44 | 2359 | 198.25 | 5 |
| Maruti Ertiga BSIV VXI | 2017 | 700000 | 227000 | Petrol | Individual | Manual | First Owner | 17.5 | 1373 | 91.1 | 7 |
| Hyundai i20 1.2 Asta | 2011 | 220000 | 220000 | Petrol | Individual | Manual | Fourth & Above Owner | 17 | 1197 | 80 | 5 |
| Maruti 800 EX | 2004 | 70000 | 220000 | Petrol | Individual | Manual | Second Owner | 16.1 | 796 | 37 | 4 |
| Honda Civic 1.8 S AT | 2007 | 175000 | 218463 | Petrol | Individual | Automatic | First Owner | 12.9 | 1799 | 130 | 5 |

**Insight 1** : People are preferring diesel cars over other varieties.

    Query: Select distinct fuel, count(*) from cars

        Group by fuel

        Order by 2 desc ;

| fuel | count(*) |
|---|---|
| Diesel | 4402 |
| Petrol | 3631 |
| CNG | 57 |
| LPG | 38 |

**Insight 2:**  Maruti Swift Dzire VDi is the best selling car, followed by Maruti Alto 800 LXI.

    Query : Select distinct name, count(*) from cars

        Group by 1

        Order by 2 desc

        Limit 10;

| name | count(*) |
|---|---|
| Maruti Swift Dzire VDi | 162 |
| Maruti Alto 800 LXI | 82 |
| Maruti Alto LXi | 80 |
| BMW X4 M Sport X xDrive20d | 62 |
| Maruti Swift VDI | 61 |
| Maruti Swift VDI BSIV | 59 |
| Maruti Swift Dzire VXi | 55 |
| Maruti Wagon R LXI | 53 |
| Maruti Alto K10 VXI | 50 |

**Insight 3:** Most Expensive Car sold is Volvo XC90 T8 Excellence BSIV for 10000000
   Query: Select name, (select max(selling_price) from cars) from cars
      Where selling_price=(select max(selling_price) from cars);

| name | max_price |
|------|-----------|
| Volvo XC90 T8 Excellence BSIV | 10000000 |

**Insight 4:**  People prefer First Hand Cars .
   Query: Select distinct Owner, count(*) from cars
      Group by Owner
      Order by 2 desc;

| owner | count(*) |
|-------|----------|
| First Owner | 5289 |
| Second Owner | 2105 |
| Third Owner | 555 |
| Fourth & Above Owner | 174 |
| Test Drive Car | 5 |

**Insight 5 :** Number of Cars bought since last 10 years, there was constant increase in sale of cars and then there was little dip in 2018 and then a huge decrease in 2020 which may be due to Covid 19 outbreak.
   Query: Select distinct year, count(*) from Cars
      Group by year
      Order by year;

| year | count(*) |
|------|----------|
| 2001 | 10 |
| 2002 | 27 |
| 2003 | 49 |
| 2004 | 62 |
| 2005 | 97 |
| 2006 | 124 |
| 2007 | 183 |
| 2008 | 214 |
| 2009 | 246 |
| 2010 | 394 |
| 2011 | 592 |
| 2012 | 651 |
| 2013 | 670 |
| 2014 | 621 |
| 2015 | 776 |
| 2016 | 859 |
| 2017 | 1018 |
| 2018 | 807 |
| 2019 | 583 |
| 2020 | 74 |

**Insight 6 :** Average kilometres travelled by the cars

        Query :  Select avg(km_driven) from cars;

| avg(km_driven) |
| --- |
| 69819.5108 |

**Insight 7 :** Car that gives max mileage is Volvo XC90 T8 Excellence BSIV which is also the most expensive car.

        Query :select name,(select max(mileage) from cars) as max_mileage  from cars
        Where mileage = (select max(mileage) from cars) ;

| name | max_mileage |
| --- | --- |
| Volvo XC90 T8 Excellence BSIV | 42 |

**Insight 8 :** Car that gives max power is Volvo XC90 T8 Excellence BSIV which is also the most expensive car

        Query: Select name, (select max(max_power) from cars) as max_p,  from cars
        Where mileage = (select max(max_power) from cars) ;

| name | max_p |
| --- | --- |
| Volvo XC90 T8 Excellence BSIV | 400 |

**Insight 9 :** Average,Maximum and Minimum seats in  given cars is

        Query: Select avg(seats), max(seats), min(seats) from cars;

| avg(seats) | max(seats) | min(seats) |
| --- | --- | --- |
| 5.4054 | 14 | 2 |

**Insight 10 :** Most Expensive car that is mostly bought by people is BMW X4 M Sport X xDrive20d

        Query: select distinct name, avg(selling_price) , count(*) from cars
         Group by name
         Having count(*)>10
         Order by avg(selling_price) desc, count(*) desc;

| name | avg(selling_price) | count(*) |
| --- | --- | --- |
| BMW X4 M Sport X xDrive20d | 5461290.3226 | 62 |
| Lexus ES 300h | 5150000.0000 | 34 |
| Volvo XC40 D4 Inscription BSIV | 3800000.0000 | 30 |
| Jaguar XF 2.0 Diesel Portfolio | 3200000.0000 | 34 |
| Jaguar XE 2016-2019 2.0L Diesel Prestige | 2676600.0000 | 30 |
| Volvo V40 D3 R-Design | 2475000.0000 | 29 |
| Toyota Camry 2.5 Hybrid | 1996969.6970 | 33 |
| Mahindra XUV500 W10 2WD | 1196391.2609 | 23 |