

SQL Project



TITANIC Case Study





```
-- 1. show first 10 rows of the dataset
```

```
SELECT *  
FROM titanic  
LIMIT 10;
```

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PassengerId	Survived	Pclass	Name	Sex
1	0	3	Braund, Mr. Owen Harris	male
2	1	1	Cumings, Mrs. John Bradley (Florence Briggs Th... er)	female
3	1	3	Heikkinen, Miss. Laina	female
4	1	1	Futrelle, Mrs. Jacques Heath (Lily May Peel)	female
5	0	3	Allen, Mr. William Henry	male
7	0	1	McCarthy, Mr. Timothy J	male
8	0	3	Palsson, Master. Gosta Leonard	male
9	1	3	Johnson, Mrs. Oscar W (Elisabeth Vilhelmina Berg)	female
10	1	2	Nasser, Mrs. Nicholas (Adele Achem)	female

Age	SibSp	Parch	Ticket	Fare	Cabin	Embarked
22	1	0	A/5 21171	7.25		S
38	1	0	PC 17599	71.2833	C85	C
26	0	0	STON/O2. 3101282	7.925		S
35	1	0	113803	53.1	C123	S
35	0	0	373450	8.05		S
54	0	0	17463	51.8625	E46	S
2	3	1	349909	21.075		S
27	0	2	347742	11.1333		S
14	1	0	237736	30.0708		C



-- 2. find number of passenger survived

```
SELECT COUNT(*) AS 'Number_of_people_survived'  
FROM titanic  
WHERE Survived = 1;
```

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	Number_of_people_survived
▶	290



-- 3. find average age of all passengers

```
SELECT AVG(Age) AS 'Avg_Age'  
FROM titanic;
```

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A screenshot of a data visualization interface. At the top, there's a toolbar with various icons. Below it is a header bar with two columns: the first is empty, and the second contains the text "Avg_Age". Underneath is a data table with two rows. The first row has two columns: the first is empty and the second contains the value "29.7129". The second row starts with a large right-pointing arrow icon.

	Avg_Age
→	29.7129



-- 4. find the number of passenger in each class.

```
SELECT Pclass,COUNT(PassengerID) AS 'Number of Passenger'  
FROM titanic  
GROUP BY Pclass  
ORDER BY Pclass ASC;
```

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Result Grid					
Pclass	Number of Passenger				
1	186				
2	173				
3	355				



-- 5. find the first 10 rows of the dataset sorted
-- by passenger class_ in descending order

```
SELECT *  
FROM titanic  
ORDER BY Pclass DESC;
```

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PassengerId	Survived	Pclass	Name	Sex
1	0	3	Braund, Mr. Owen Harris	male
3	1	3	Heikkinen, Miss. Laina	female
5	0	3	Allen, Mr. William Henry	male
8	0	3	Palsson, Master. Gosta Leonard	male
9	1	3	Johnson, Mrs. Oscar W (Elisabeth Vilhelmina Berg)	female
11	1	3	Sandstrom, Miss. Marguerite Rut	female
13	0	3	Saundercock, Mr. William Henry	male
14	0	3	Andersson, Mr. Anders Johan	male
15	0	3	Vestrom, Miss. Hulda Amanda Adolfina	female

titanic 18 ×

Age	SibSp	Parch	Ticket	Fare	Cabin	Embarked
22	1	0	A/5 21171	7.25		S
26	0	0	STON/O2. 3101282	7.925		S
35	0	0	373450	8.05		S
2	3	1	349909	21.075		S
27	0	2	347742	11.1333		S
4	1	1	PP 9549	16.7	G6	S
20	0	0	A/5. 2151	8.05		S
39	1	5	347082	31.275		S
14	0	0	350406	7.8542		S



```
-- 6. find the number of passengers in each class_
-- sorted by class_ in ascending order
```

```
SELECT Pclass, COUNT(PassengerId) AS 'Passenger'
FROM titanic
GROUP BY Pclass
ORDER BY Pclass ASC;
```

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Pclass

Passenger

1

186

2

173

3

355



-- 7. find the average fare paid by passengers
-- in each class_

```
SELECT ROUND(AVG(Fare),2) AS Avg_Fare  
FROM titanic;
```

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Avg Fare

34.69



-- 8. find the name of the passenger
-- with highest fare

```
SELECT Name, Fare  
FROM titanic  
ORDER BY Fare DESC  
LIMIT 5;
```

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-- second method

```
SELECT Name, Fare  
FROM titanic  
WHERE Fare = (SELECT MAX(Fare)  
               FROM titanic);
```

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Result Grid | Filter Rows:

Name	Fare
Ward, Miss. Anna	512.3292
Lesurer, Mr. Gustave J	512.3292
Cardeza, Mr. Thomas Drake Martinez	512.3292
Fortune, Mr. Mark	263
Fortune, Miss. Mabel Helen	263



-- 9. find the name of the passenger who had the
-- highest age among the survivors

```
SELECT Name, Age  
FROM titanic  
WHERE Age = (SELECT Max(Age)  
              From titanic  
              WHERE Survived = 1);
```

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Name	Age
Barkworth, Mr. Algernon Henry Wilson	80



```
-- 10. find the number of the passenger who had  
-- paid more then average fare
```

```
SELECT COUNT(PassengerId) AS 'No. of Passenger'  
FROM titanic  
where Fare > (SELECT AVG(Fare)  
                FROM titanic);
```

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No. of
Passenger

172



```
-- 11. find the name of the passenger who had the  
-- most parents or children on board
```

```
SELECT Name, Parch AS 'Parents_Children'  
FROM titanic  
WHERE Parch = (SELECT MAX(Parch)  
                FROM titanic);
```

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Result Grid | Filter Rows: Export:

Name	Parents_Children
Goodwin, Mrs. Frederick (Augusta Tyler)	6



```
-- 12. find the number of male and female passenger who survived,  
-- and order the result by sex in ascending order
```

```
SELECT Sex, COUNT(Sex) AS 'No. of Passenger'  
FROM titanic  
WHERE Survived = 1  
GROUP BY Sex  
ORDER BY Sex ASC;
```

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Sex	No. of Passenger
female	197
male	93



-- 13. find the name, age and fare of the
-- oldest passenger who survived

```
SELECT Name, Age, Fare  
FROM titanic  
WHERE AGE = (SELECT MAX(Age)  
              FROM titanic  
              WHERE Survived = 1);
```

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Name	Age	Fare
Barkworth, Mr. Algernon Henry Wilson	80	30



```
-- 14. find the name and age of the youngest female  
-- passenger who survived in the third class_
```

```
SELECT Name, Age  
FROM titanic  
WHERE Sex = 'female'  
AND Survived = 1  
AND Pclass = 3  
AND Age = (SELECT MIN(Age)  
            FROM titanic  
            WHERE Sex = 'female'  
            AND Survived = 1  
            AND Pclass = 3);
```

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Name	Age
Johnson, Miss. Eleanor Ileen	1
Nakid, Miss. Maria (Mary")	1
Badini, Miss. Helene Barbara	1
Badini, Miss. Eugenie	1



-- 15. find the number of male and female passenger

```
SELECT Sex, COUNT(Sex)  
FROM titanic  
GROUP BY Sex;
```

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	Sex	COUNT(Sex)
▶	male	453
	female	261



-- second method

```
SELECT
```

```
    SUM(CASE WHEN Sex = 'male'  
            THEN 1  
            ELSE 0 END) AS 'No. of Male',  
  
    SUM(CASE WHEN Sex = 'female'  
            THEN 1  
            ELSE 0 END) AS 'No. of Females'
```

```
FROM titanic;
```

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	No. of Male	No. of Females
▶	453	261



-- 16. select all the passenger who travelled
-- in a cabin that was not shared by other passenger

```
SELECT *
FROM titanic
WHERE Cabin IN (SELECT Cabin
                  FROM titanic
                  GROUP BY Cabin
                  HAVING COUNT(Cabin) <= 1);
```

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PassengerId	Survived	Pclass	Name	Sex
2	1	1	Cumings, Mrs. John Bradley (Florence Briggs Th... ...e)	female
7	0	1	McCarthy, Mr. Timothy J	male
12	1	1	Bonnell, Miss. Elizabeth	female
22	1	2	Beesley, Mr. Lawrence	male
24	1	1	Sloper, Mr. William Thompson	male
55	0	1	Ostby, Mr. Engelhart Cornelius	male
93	0	1	Chaffee, Mr. Herbert Fuller	male
97	0	1	Goldschmidt, Mr. George B	male
98	1	1	Greenfield, Mr. William Bertram	male

Age	SibSp	Parch	Ticket	Fare	Cabin	Embarked
38	1	0	PC 17599	71.2833	C85	C
54	0	0	17463	51.8625	E46	S
58	0	0	113783	26.55	C103	S
34	0	0	248698	13	D56	S
28	0	0	113788	35.5	A6	S
65	0	1	113509	61.9792	B30	C
46	1	0	W.E.P. 5734	61.175	E31	S
71	0	0	PC 17754	34.6542	A5	C
23	0	1	PC 17759	63.3583	D10 D12	C