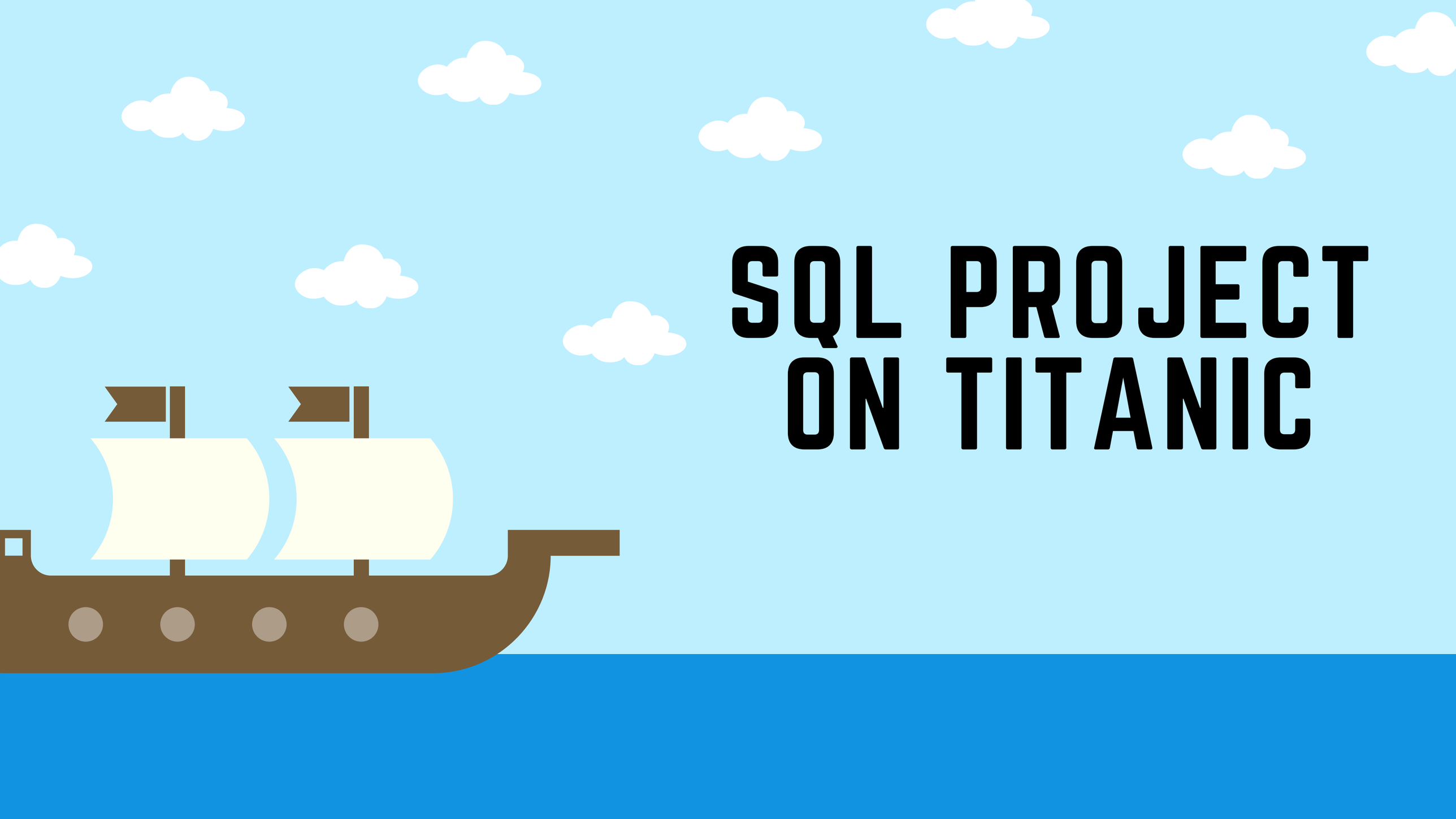
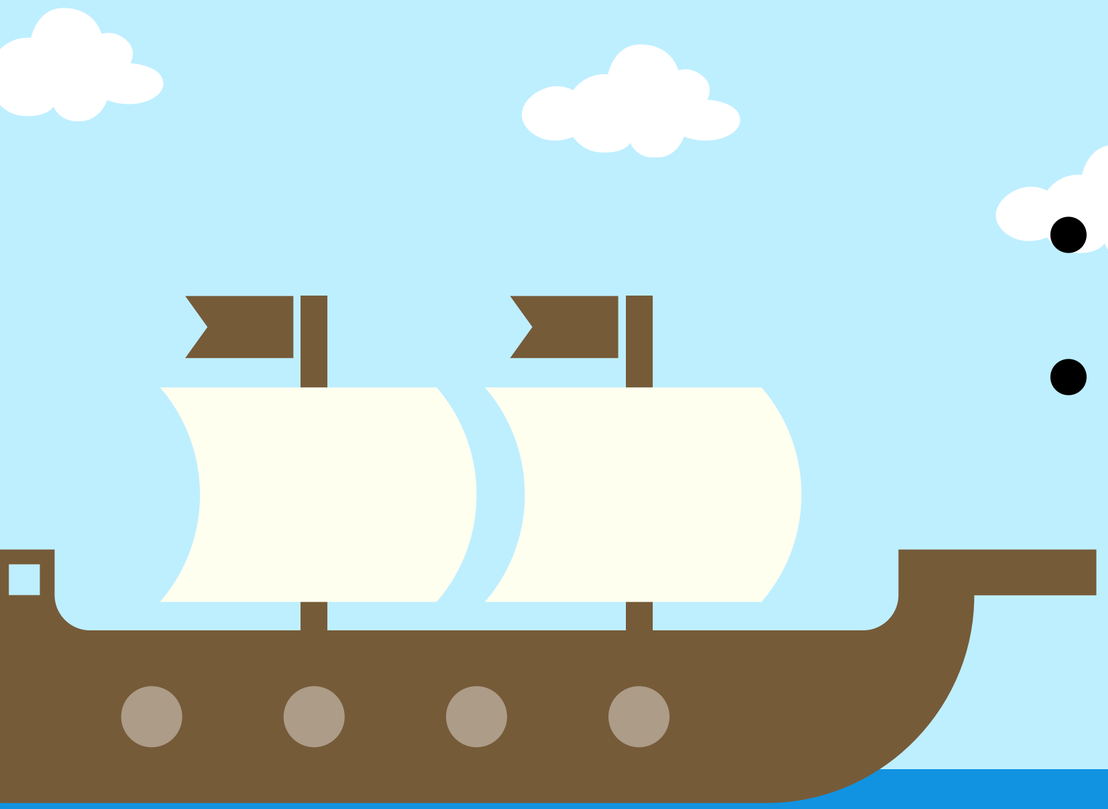
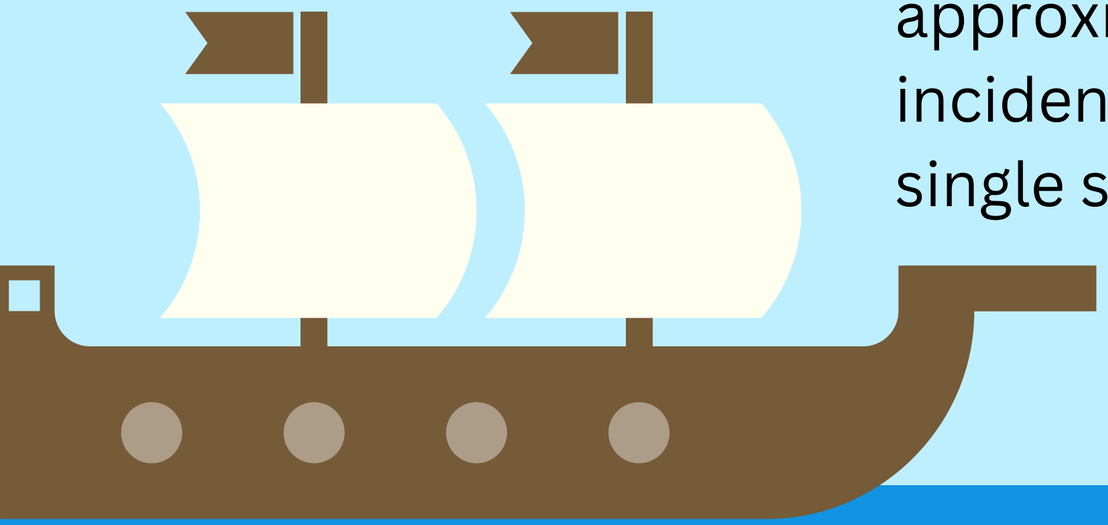

SQL PROJECT
ON TITANIC



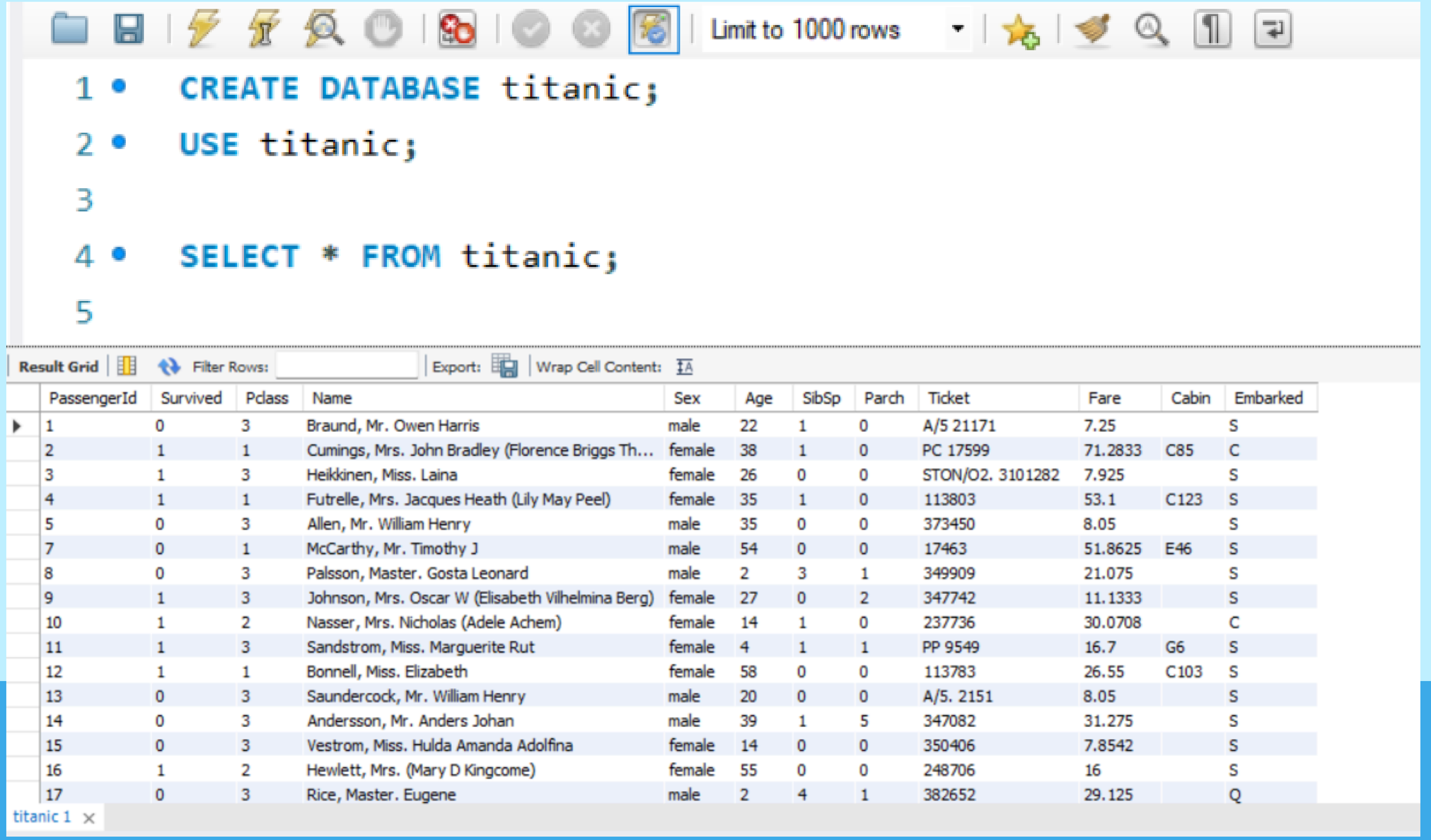
Contents

- History of Titanic
- SQL Queries to get Insights



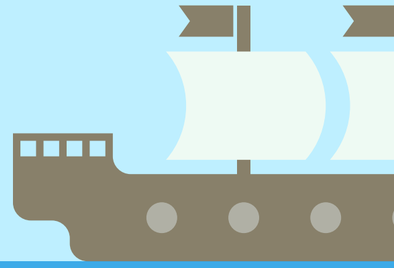
- **Titanic** was a British ocean liner that sank on 15 April 1912 as a result of striking an iceberg on her maiden voyage from Southampton, England, to New York City, United States.
- Of the estimated 2,224 passengers and crew aboard, approximately 1,500 died (figures vary), making the incident one of the deadliest peacetime sinkings of a single ship.

Creation of Database & Importing Dataset (Kaggle)



PassengerId	Survived	Pclass	Name	Sex	Age	SibSp	Parch	Ticket	Fare	Cabin	Embarked
1	0	3	Braund, Mr. Owen Harris	male	22	1	0	A/5 21171	7.25		S
2	1	1	Cumings, Mrs. John Bradley (Florence Briggs Th...	female	38	1	0	PC 17599	71.2833	C85	C
3	1	3	Heikkinen, Miss. Laina	female	26	0	0	STON/O2. 3101282	7.925		S
4	1	1	Futrelle, Mrs. Jacques Heath (Lily May Peel)	female	35	1	0	113803	53.1	C123	S
5	0	3	Allen, Mr. William Henry	male	35	0	0	373450	8.05		S
7	0	1	McCarthy, Mr. Timothy J	male	54	0	0	17463	51.8625	E46	S
8	0	3	Palsson, Master. Gosta Leonard	male	2	3	1	349909	21.075		S
9	1	3	Johnson, Mrs. Oscar W (Elisabeth Vilhelmina Berg)	female	27	0	2	347742	11.1333		S
10	1	2	Nasser, Mrs. Nicholas (Adele Achem)	female	14	1	0	237736	30.0708		C
11	1	3	Sandstrom, Miss. Marguerite Rut	female	4	1	1	PP 9549	16.7	G6	S
12	1	1	Bonnell, Miss. Elizabeth	female	58	0	0	113783	26.55	C103	S
13	0	3	Saundercock, Mr. William Henry	male	20	0	0	A/5. 2151	8.05		S
14	0	3	Andersson, Mr. Anders Johan	male	39	1	5	347082	31.275		S
15	0	3	Vestrom, Miss. Hulda Amanda Adolfina	female	14	0	0	350406	7.8542		S
16	1	2	Hewlett, Mrs. (Mary D Kingcome)	female	55	0	0	248706	16		S
17	0	3	Rice, Master. Eugene	male	2	4	1	382652	29.125		Q

titanic 1

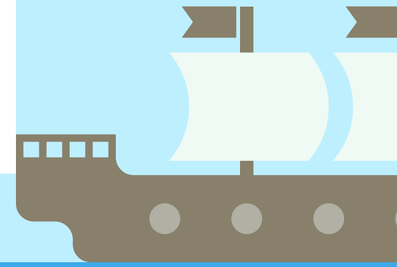


1. Show First 10 Rows of the Dataset

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

Result Grid | Filter Rows: | Export: | Wrap Cell Content: | Fetch rows:

PassengerId	Survived	Pclass	Name	Sex	Age	SibSp	Parch	Ticket	Fare	Cabin	Embarked
1	0	3	Braund, Mr. Owen Harris	male	22	1	0	A/5 21171	7.25		S
2	1	1	Cumings, Mrs. John Bradley (Florence Briggs Th...	female	38	1	0	PC 17599	71.2833	C85	C
3	1	3	Heikkinen, Miss. Laina	female	26	0	0	STON/O2. 3101282	7.925		S
4	1	1	Futrelle, Mrs. Jacques Heath (Lily May Peel)	female	35	1	0	113803	53.1	C123	S
5	0	3	Allen, Mr. William Henry	male	35	0	0	373450	8.05		S
7	0	1	McCarthy, Mr. Timothy J	male	54	0	0	17463	51.8625	E46	S
8	0	3	Palsson, Master. Gosta Leonard	male	2	3	1	349909	21.075		S
9	1	3	Johnson, Mrs. Oscar W (Elisabeth Vilhelmina Berg)	female	27	0	2	347742	11.1333		S
10	1	2	Nasser, Mrs. Nicholas (Adele Achem)	female	14	1	0	237736	30.0708		C
11	1	3	Sandstrom, Miss. Marguerite Rut	female	4	1	1	PP 9549	16.7	G6	S

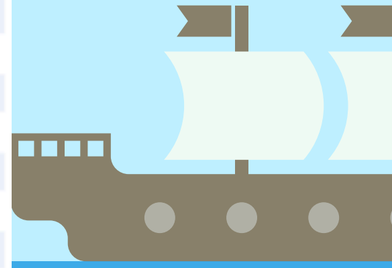


2. Show Last 10 Rows of the Dataset

```
SELECT * FROM titanic
ORDER BY PassengerId DESC
LIMIT 10;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: | Fetch rows:

PassengerId	Survived	Pclass	Name	Sex	Age	SibSp	Parch	Ticket	Fare	Cabin	Embarked
891	0	3	Dooley, Mr. Patrick	male	32	0	0	370376	7.75		Q
890	1	1	Behr, Mr. Karl Howell	male	26	0	0	111369	30	C148	C
888	1	1	Graham, Miss. Margaret Edith	female	19	0	0	112053	30	B42	S
887	0	2	Montvila, Rev. Juozas	male	27	0	0	211536	13		S
886	0	3	Rice, Mrs. William (Margaret Norton)	female	39	0	5	382652	29.125		Q
885	0	3	Sutehall, Mr. Henry Jr	male	25	0	0	SOTON/OQ 392076	7.05		S
884	0	2	Banfield, Mr. Frederick James	male	28	0	0	C.A./SOTON 34068	10.5		S
883	0	3	Dahlberg, Miss. Gerda Ulrika	female	22	0	0	7552	10.5167		S
882	0	3	Markun, Mr. Johann	male	33	0	0	349257	7.8958		S
881	1	2	Shelley, Mrs. William (Imanita Parrish Hall)	female	25	0	1	230433	26		S

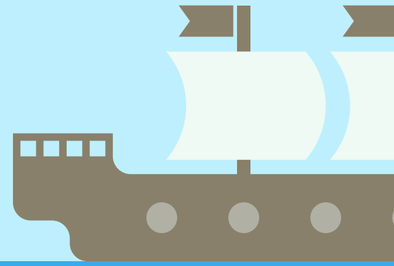


3. Find the number of passengers survived in the Titanic

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

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

	Passengers_Survived
▶	290

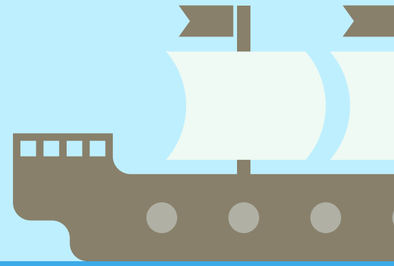


4. Find the average age of all passengers in the ship

```
SELECT
    AVG(age) AS 'Average_Age'
FROM
    titanic;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

	Average_Age
▶	29.7129

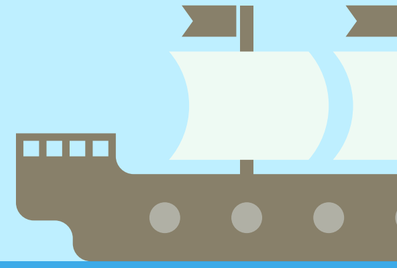


5. Find the number of passengers in each class of the ship

```sql
SELECT
    Pclass, COUNT(*) AS 'No. of Passengers'
FROM
    titanic
GROUP BY Pclass;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

Pclass	No. of Passengers
3	355
1	186
2	173

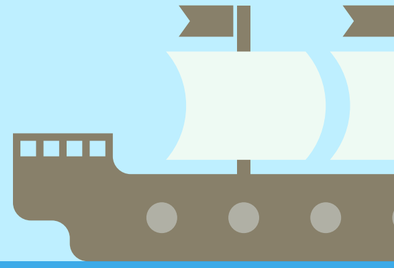


6. Find the first 10 Rows of the Dataset sorted by passenger class in Descending order

```
SELECT
    *
FROM
    titanic
ORDER BY Pclass DESC
LIMIT 10;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: | Fetch rows:

PassengerId	Survived	Pclass	Name	Sex	Age	SibSp	Parch	Ticket	Fare	Cabin	Embarked
1	0	3	Braund, Mr. Owen Harris	male	22	1	0	A/5 21171	7.25		S
443	0	3	Petterson, Mr. Johan Emil	male	25	1	0	347076	7.775		S
3	1	3	Heikkinen, Miss. Laina	female	26	0	0	STON/O2. 3101282	7.925		S
891	0	3	Dooley, Mr. Patrick	male	32	0	0	370376	7.75		Q
5	0	3	Allen, Mr. William Henry	male	35	0	0	373450	8.05		S
785	0	3	Ali, Mr. William	male	25	0	0	SOTON/O.Q. 3101312	7.05		S
8	0	3	Palsson, Master. Gosta Leonard	male	2	3	1	349909	21.075		S
9	1	3	Johnson, Mrs. Oscar W (Elisabeth Vilhelmina Berg)	female	27	0	2	347742	11.1333		S
449	1	3	Baclini, Miss. Marie Catherine	female	5	2	1	2666	19.2583		C
11	1	3	Sandstrom, Miss. Marguerite Rut	female	4	1	1	PP 9549	16.7	G6	S

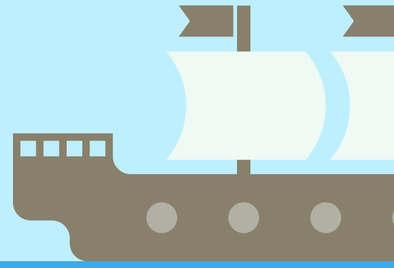


7. Find the number of passengers in each class sorted by class in ascending order

```
SELECT
    Pclass, COUNT(*)
FROM
    titanic
GROUP BY Pclass
ORDER BY Pclass ASC;
```

Result Grid | Filter Rows: | Export:

Pclass	COUNT(*)
1	186
2	173
3	355

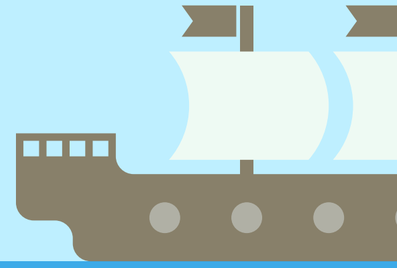


8. Find the average fair paid by passengers in each class

```sql
SELECT
    Pclass, ROUND(AVG(Fare), 2) AS 'Average_Fare'
FROM
    titanic
GROUP BY Pclass
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

Pclass	Average_Fare
3	13.23
1	87.96
2	21.47

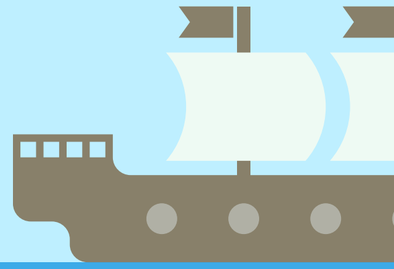


9. Find the name of passengers with highest fare

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

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

Name	Fare
Ward, Miss. Anna	512.3292
Cardeza, Mr. Thomas Drake Martinez	512.3292
Lesurer, Mr. Gustave J	512.3292

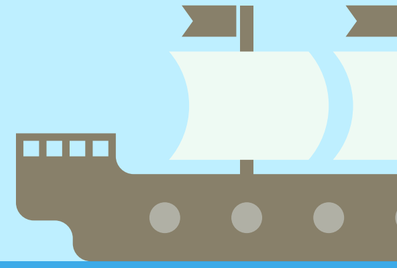


10. Find the name of passenger who had the highest age among survivors

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

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

	Name	Age
▶	Barkworth, Mr. Algernon Henry Wilson	80

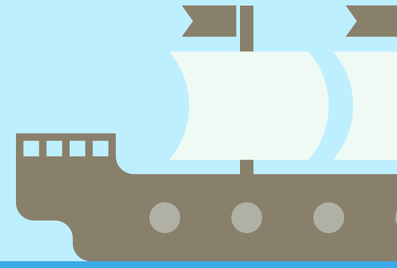


11. Find the number of passengers who paid more than the average fare

```
SELECT
    COUNT(*) AS 'No_of_passengers'
FROM
    titanic
WHERE
    Fare > (SELECT
            AVG(Fare)
        FROM
            titanic);
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

	No_of_passengers
▶	172

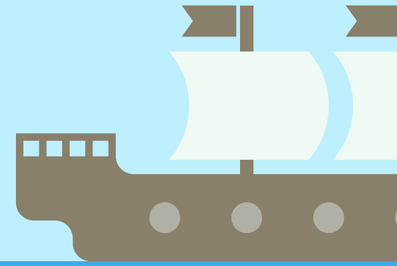


12. Find the name of passenger who had the most parents or children on board

```
SELECT
    Name
FROM
    titanic
WHERE
    Parch = (SELECT
            MAX(Parch)
        FROM
            titanic);
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

	Name
▶	Goodwin, Mrs. Frederick (Augusta Tyler)

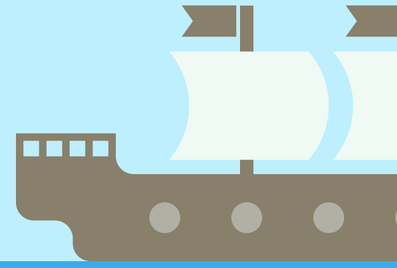


13. Find the number of male and female passengers who survived and order the results by sex in ascending order

```sql
SELECT
    Sex, COUNT(*) AS 'No_of_Survivors'
FROM
    titanic
WHERE
    Survived = 1
GROUP BY Sex
ORDER BY Sex ASC;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

Sex	No_of_Survivors
female	197
male	93

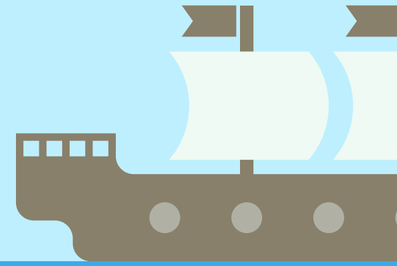


14. Find the name, age and fare of the oldest passenger who survived

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

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

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

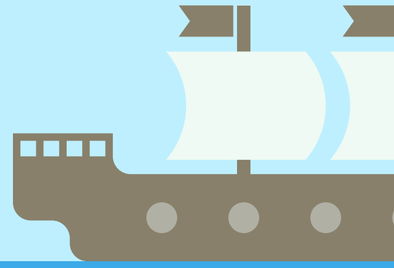


15. Find the name and age of the youngest female passenger who survived in the third class

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

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

Name	Age	Pclass
Johnson, Miss. Eleanor Ileen	1	3
Nakid, Miss. Maria ("Mary"")	1	3
Badini, Miss. Helene Barbara	1	3
Badini, Miss. Eugenie	1	3

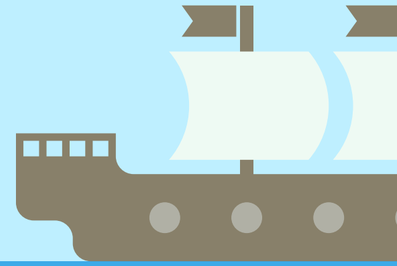


16. Find the number of male and female passengers

```sql
SELECT
    SUM(CASE
        WHEN Sex = 'male' THEN 1
        ELSE 0
    END) AS 'No_Males',
    SUM(CASE
        WHEN Sex = 'female' THEN 1
        ELSE 0
    END) AS 'No_Females'
FROM
    titanic;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

	No_Males	No_Females
▶	453	261

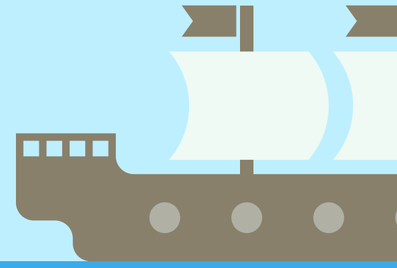


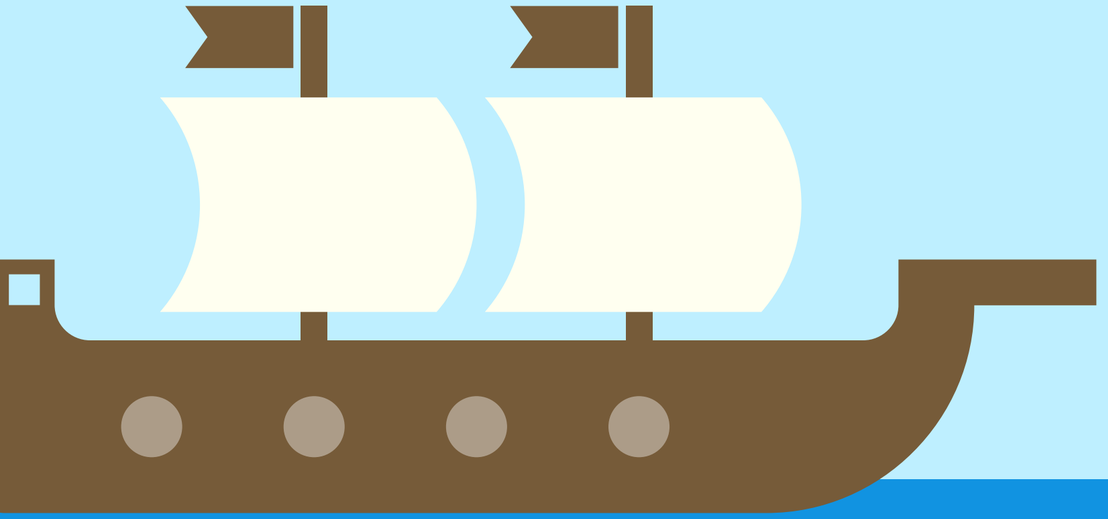
17. Select all passengers who travelled in a cabin that was not shared by other passengers

```sql
SELECT
    *
FROM
    titanic
WHERE
    Cabin NOT IN (SELECT
            Cabin
        FROM
            titanic
        GROUP BY Cabin
        HAVING COUNT(*) > 1);
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

PassengerId	Survived	Pclass	Name	Sex	Age	SibSp	Parch	Ticket	Fare	Cabin	Embarked
2	1	1	Cumings, Mrs. John Bradley (Florence Briggs Th...	female	38	1	0	PC 17599	71.2833	C85	C
7	0	1	McCarthy, Mr. Timothy J	male	54	0	0	17463	51.8625	E46	S
12	1	1	Bonnell, Miss. Elizabeth	female	58	0	0	113783	26.55	C103	S
22	1	2	Beesley, Mr. Lawrence	male	34	0	0	248698	13	D56	S
24	1	1	Sloper, Mr. William Thompson	male	28	0	0	113788	35.5	A6	S
55	0	1	Ostby, Mr. Engelhart Cornelius	male	65	0	1	113509	61.9792	B30	C
93	0	1	Chaffee, Mr. Herbert Fuller	male	46	1	0	W.E.P. 5734	61.175	E31	S
97	0	1	Goldschmidt, Mr. George B	male	71	0	0	PC 17754	34.6542	A5	C
98	1	1	Greenfield, Mr. William Bertram	male	23	0	1	PC 17759	63.3583	D10 D12	C
111	0	1	Porter, Mr. Walter Chamberlain	male	47	0	0	110465	52	C110	S
137	1	1	Newsom, Miss. Helen Monypeny	female	19	0	2	11752	26.2833	D47	S
140	0	1	Giglio, Mr. Victor	male	24	0	0	PC 17593	79.2	B86	C



Thank You

See You Next