Before Cleaning

titanic new.csv

pclass	survived	name	sex	age	sibsp	parch	ticket	fare	embarked
1	1	Allen, Miss	female	29	0	0	24160	211.3375	S
1	1	Allison, Ma	male	0.9167	1	2	113781	151.55	S
1	0	Allison, Mi	female	2	1	2	113781	151.55	S
1	0	Allison, Mr	male	30	1	2	113781	151.55	S
1	0	Allison, Mr	female	25	1	2	113781	151.55	S
1	1	Anderson,	male	48	0	0	19952	26.55	S
1	1	Andrews, M	female	63	1	0	13502	77.9583	S
1	0	Andrews, M	male	39	0	0	112050	0	S
1	1	Appleton, I	female	53	2	0	11769	51.4792	S
1	0	Artagaveyt	male	71	0	0	PC 17609	49.5042	C
1	0	Astor, Col.	male	47	1	0	PC 17757	227.525	C
1	1	Astor, Mrs.	female	18	1	0	PC 17757	227.525	C
1	1	Aubart, Mr	female	24	0	0	PC 17477	69.3	C
1	1	Barber, Mi	female	26	0	0	19877	78.85	S

After Cleaning

Final_Data.xlsx

pclass	survived	name	sex	age	sibsp	parch	ticket	fare	embarked	Alive or Dead	Age Types
1	1	Allen, Miss. Elisabeth Walton	female	29	0	0	24160	211.3375	S	Alive	Early adulthood
1	1	Allison, Master. Hudson Trevor	male	0.9167	1	2	113781	151.55	S	Alive	Infancy
1	0	Allison, Miss. Helen Loraine	female	2	1	2	113781	151.55	S	Dead	Childhood
1	0	Allison, Mr. Hudson Joshua Creighton	male	30	1	2	113781	151.55	S	Dead	Early adulthood
1	0	Allison, Mrs. Hudson J C (Bessie Waldo Daniels)	female	25	1	2	113781	151.55	S	Dead	Early adulthood
1	1	Anderson, Mr. Harry	male	48	0	0	19952	26.55	S	Alive	Late adulthood
1	1	Andrews, Miss. Kornelia Theodosia	female	63	1	0	13502	77.9583	S	Alive	Early old age
1	0	Andrews, Mr. Thomas Jr	male	39	0	0	112050	0	S	Dead	Middle adulthood
1	1	Appleton, Mrs. Edward Dale (Charlotte Lamson)	female	53	2	0	11769	51.4792	S	Alive	Late adulthood
1	0	Artagaveytia, Mr. Ramon	male	71	0	0	PC 17609	49.5042	C	Dead	Early old age
1	0	Astor, Col. John Jacob	male	47	1	0	PC 17757	227.525	C	Dead	Late adulthood
1	1	Astor, Mrs. John Jacob (Madeleine Talmadge Force)	female	18	1	0	PC 17757	227.525	C	Alive	teenage
1	1	Aubart, Mme. Leontine Pauline	female	24	0	0	PC 17477	69.3	C	Alive	Early adulthood
1	1	Barber, Miss. Ellen "Nellie"	female	26	0	0	19877	78.85	S	Alive	Early adulthood
1	1	Barkworth, Mr. Algernon Henry Wilson	male	80	0	0	27042	30	S	Alive	Middle old age
1	0	Baumann, Mr. John D	male	30	0	0	PC 17318	25.925	S	Dead	Early adulthood
1	0	Baxter, Mr. Quigg Edmond	male	24	0	1	PC 17558	247.5208	C	Dead	Early adulthood
1	1	Baxter, Mrs. James (Helene DeLaudeniere Chaput)	female	50	0	1	PC 17558	247.5208	C	Alive	Late adulthood
1	1	Bazzani, Miss. Albina	female	32	0	0	11813	76.2917	C	Alive	Middle adulthood

Cleaning the CSV & Excel File By using Python

Check null.py

```python
import pandas as pd

df = pd.read_csv('titanic new.csv')

print(df.isnull().sum())
```

Age_replace.py

```
import pandas as pd

df = pd.read_csv('titanic new.csv')
temp = df
temp['age'] = temp['age'].fillna(round(temp['age'].mean()))

print(print(temp.isnull().sum()))
```

Age_Range_Creation
.py

```
"""
1. Infancy (neonate and up to one year age)
2. Childhood (1 to 11 years old)
3. Adolescence or teenage (from 12 to 18 years old)
4. Early adulthood (18 to 30 years)
5. Middle adulthood (30 to 45 years)
6. Late adulthood (45 to 60 years)
7. Early old age (60 to 75 years)
8. Middle old age (75 to 90 years)
9. Late old age (over 90 years)
"""

import pandas as pd
import numpy as np

df = pd.read_excel('Final_Data.xlsx')
temp = df

conditions = [
    (temp['age'] <= 1),
    (temp['age'] > 1) & (temp['age'] <= 11),
    (temp['age'] > 11) & (temp['age'] <= 18),
    (temp['age'] > 18) & (temp['age'] <= 30),
    (temp['age'] > 30) & (temp['age'] <= 45),
    (temp['age'] > 45) & (temp['age'] <= 60),
    (temp['age'] > 60) & (temp['age'] <= 75),
    (temp['age'] > 75) & (temp['age'] <= 90),
    (df['age'] > 90)
    ]

values = ["Infancy",
"Childhood","teenage",
"Early adulthood",
"Middle adulthood",
"Late adulthood",
"Early old age",
"Middle old age",
"Late old age"]

temp['Age Types'] = np.select(conditions, values)

print(temp)
```

Fare_replace.py

```
import pandas as pd

df = pd.read_csv('titanic new.csv')
temp = df
temp['fare'] = temp['fare'].fillna((temp['fare'].mean()))

print(print(temp.isnull().sum()))
```

Embarked_replace.py

```
import pandas as pd

df = pd.read_csv('titanic new.csv')
temp = df
temp['embarked'] = temp['embarked'].fillna("s")

print(print(temp.isnull().sum()))
```

survived_Creation.py

```
import pandas as pd

df = pd.read_csv('titanic new.csv')
temp = df
temp['Alive or Dead'] = ["Alive " if x ==1 else "Dead" for x in
temp['survived']]

print(temp)
```

Cleaning the give data by using Python

Cleaning.py

```
import pandas as pd
import numpy as np

df = pd.read_csv('titanic new.csv')
temp = df

temp['fare'] = temp['fare'].fillna((temp['fare'].mean()))

temp['embarked'] = temp['embarked'].fillna("s")

temp['age'] = temp['age'].fillna(round(temp['age'].mean()))

temp['Alive or Dead'] = ["Alive " if x ==1 else "Dead" for x in
temp['survived']]

conditions = [
    (temp['age'] <= 1),
    (temp['age'] > 1) & (temp['age'] <= 11),
    (temp['age'] > 11) & (temp['age'] <= 18),
    (temp['age'] > 18) & (temp['age'] <= 30),
    (temp['age'] > 30) & (temp['age'] <= 45),
    (temp['age'] > 45) & (temp['age'] <= 60),
    (temp['age'] > 60) & (temp['age'] <= 75),
    (temp['age'] > 75) & (temp['age'] <= 90),
    (df['age'] > 90)
    ]

values = ["Infancy","Childhood","teenage","Early adulthood","Middle
adulthood","Late adulthood","Early old age","Middle old age","Late old
age"]

temp['Age Types'] = np.select(conditions, values)

df.to_excel("Final_Data.xlsx",index=False)
```

Final_Data.xlsx

Task Details.docx

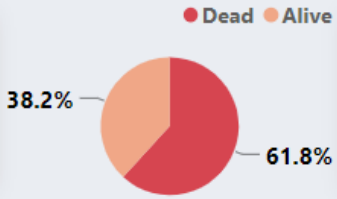
Report.pdf

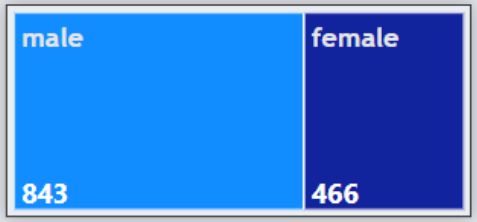
Report.pbix

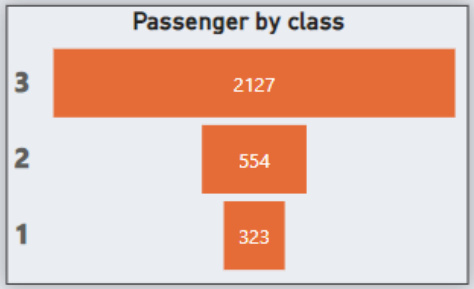
Full Dashboard by using Power BI

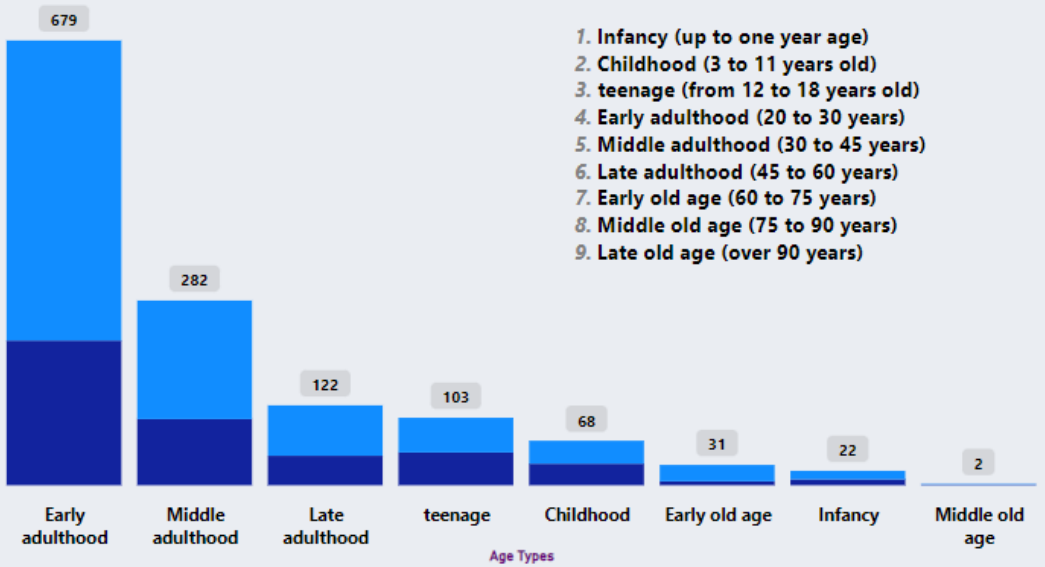
TITANIC REPORT

Total Passengers	Total Fare Price	Total Alive	Total Dead
1309	43,583.78	500	809



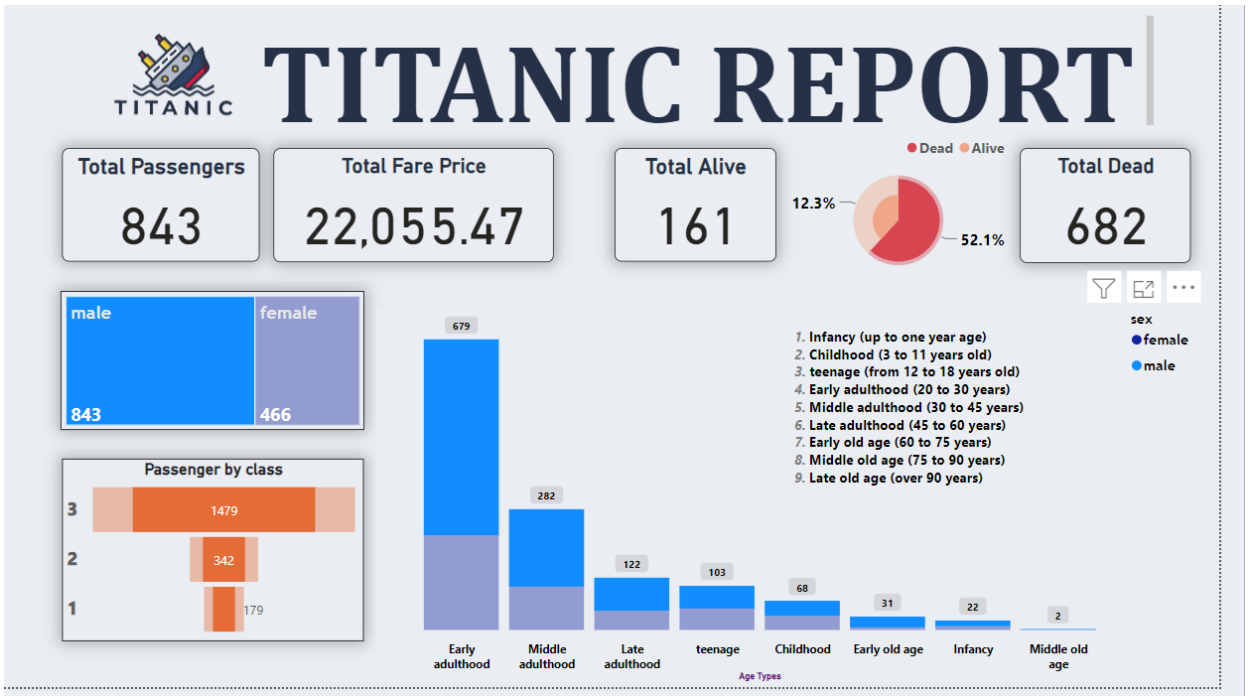


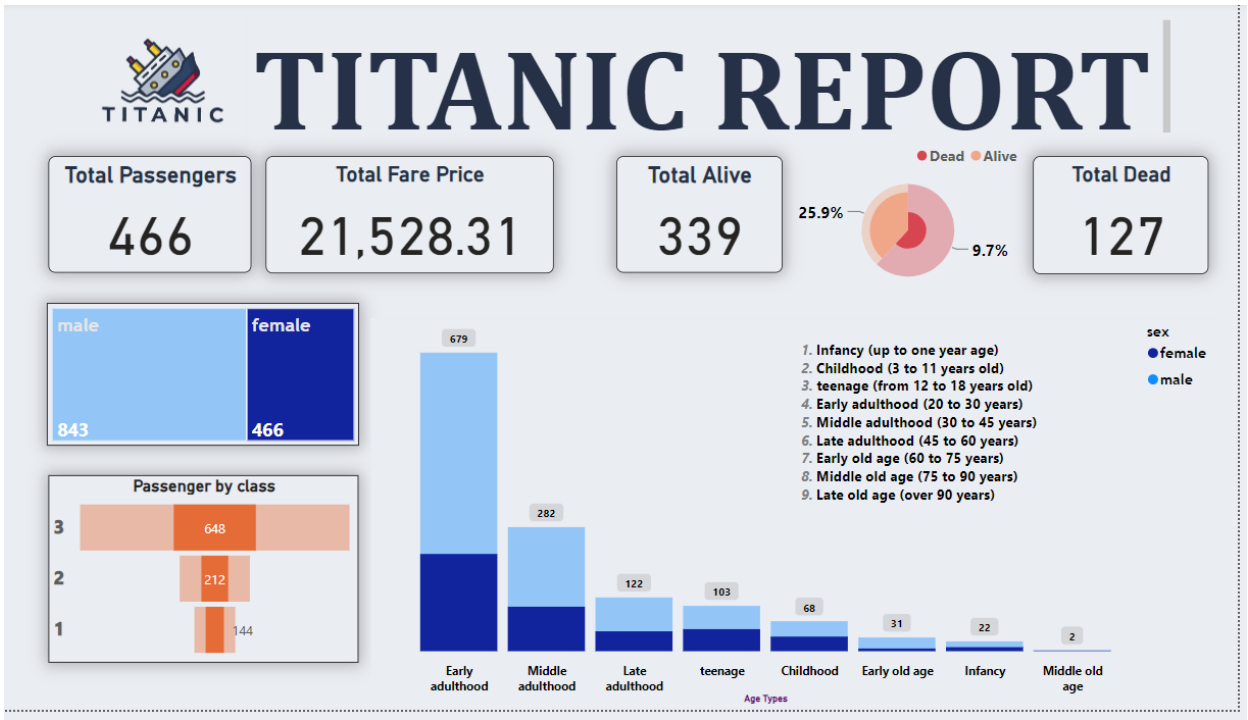




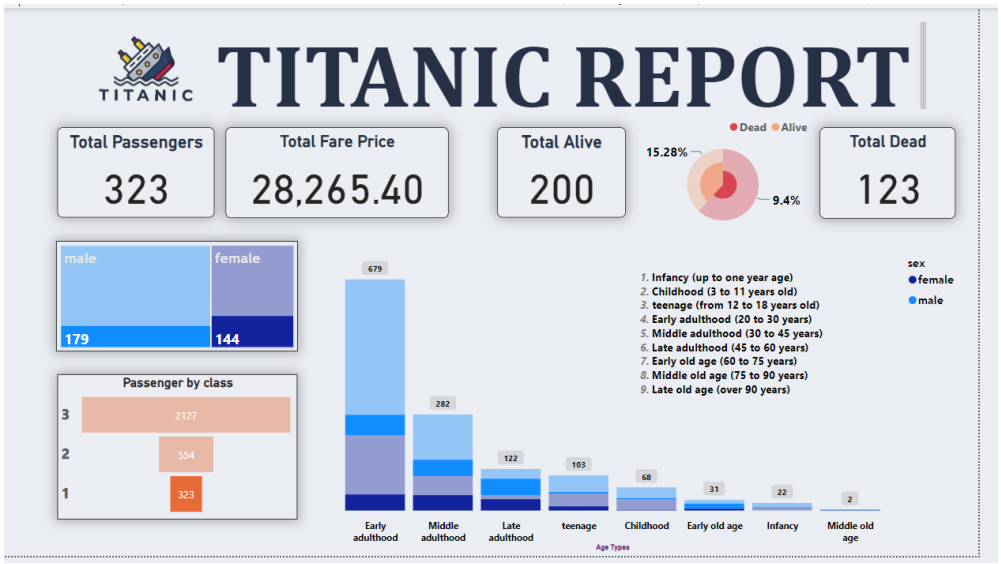
1. Infancy (up to one year age)
2. Childhood (3 to 11 years old)
3. teenage (from 12 to 18 years old)
4. Early adulthood (20 to 30 years)
5. Middle adulthood (30 to 45 years)
6. Late adulthood (45 to 60 years)
7. Early old age (60 to 75 years)
8. Middle old age (75 to 90 years)
9. Late old age (over 90 years)

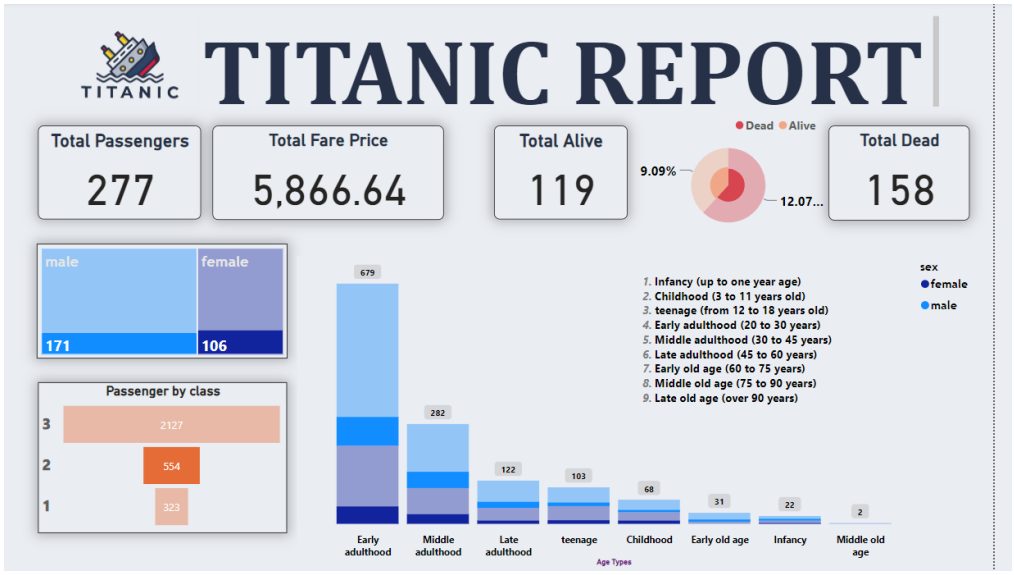
Classification based on Gender

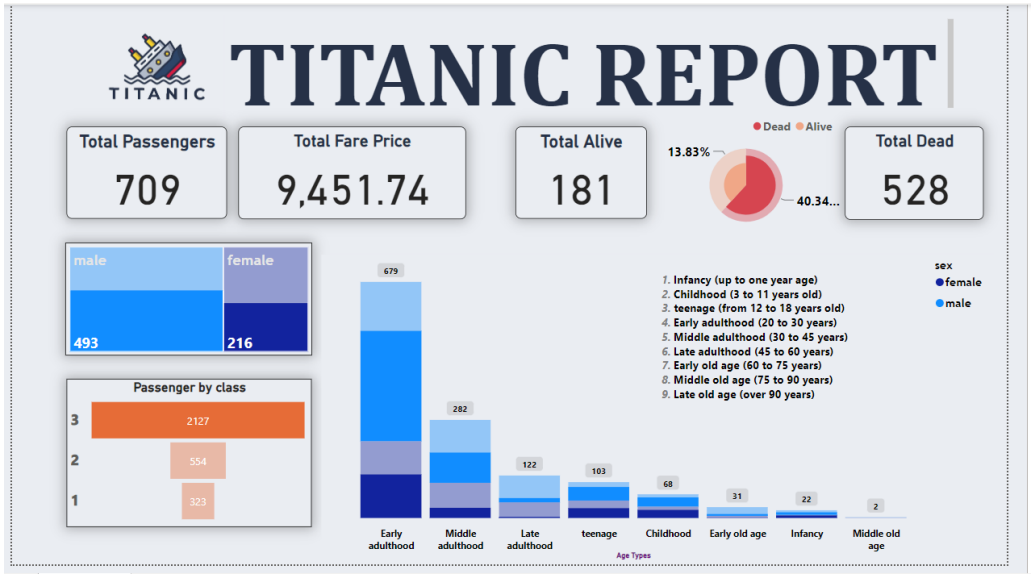

TITANIC REPORT
TITANIC
Total Passengers
843
Total Fare Price
22,055.47
Total Alive
161
Dead Alive
12.3%
52.1%
Total Dead
682
male
843
female
466
Passenger by class
3
1479
2
342
1
179
679
282
122
103
68
31
22
2
Early adulthood
Middle adulthood
Late adulthood
teenage
Childhood
Early old age
Infancy
Middle old age
Age Types
1. Infancy (up to one year age)
2. Childhood (3 to 11 years old)
3. teenage (from 12 to 18 years old)
4. Early adulthood (20 to 30 years)
5. Middle adulthood (30 to 45 years)
6. Late adulthood (45 to 60 years)
7. Early old age (60 to 75 years)
8. Middle old age (75 to 90 years)
9. Late old age (over 90 years)
sex
female
male


TITANIC REPORT
TITANIC
Total Passengers
466
Total Fare Price
21,528.31
Total Alive
339
Dead Alive
25.9%
9.7%
Total Dead
127
male
843
female
466
Passenger by class
3
648
2
212
1
144
679
282
122
103
68
31
22
2
Early adulthood
Middle adulthood
Late adulthood
teenage
Childhood
Early old age
Infancy
Middle old age
Age Types
1. Infancy (up to one year age)
2. Childhood (3 to 11 years old)
3. teenage (from 12 to 18 years old)
4. Early adulthood (20 to 30 years)
5. Middle adulthood (30 to 45 years)
6. Late adulthood (45 to 60 years)
7. Early old age (60 to 75 years)
8. Middle old age (75 to 90 years)
9. Late old age (over 90 years)
sex
female
male

Classification based on Classes [1st, 2nd, 3rd]

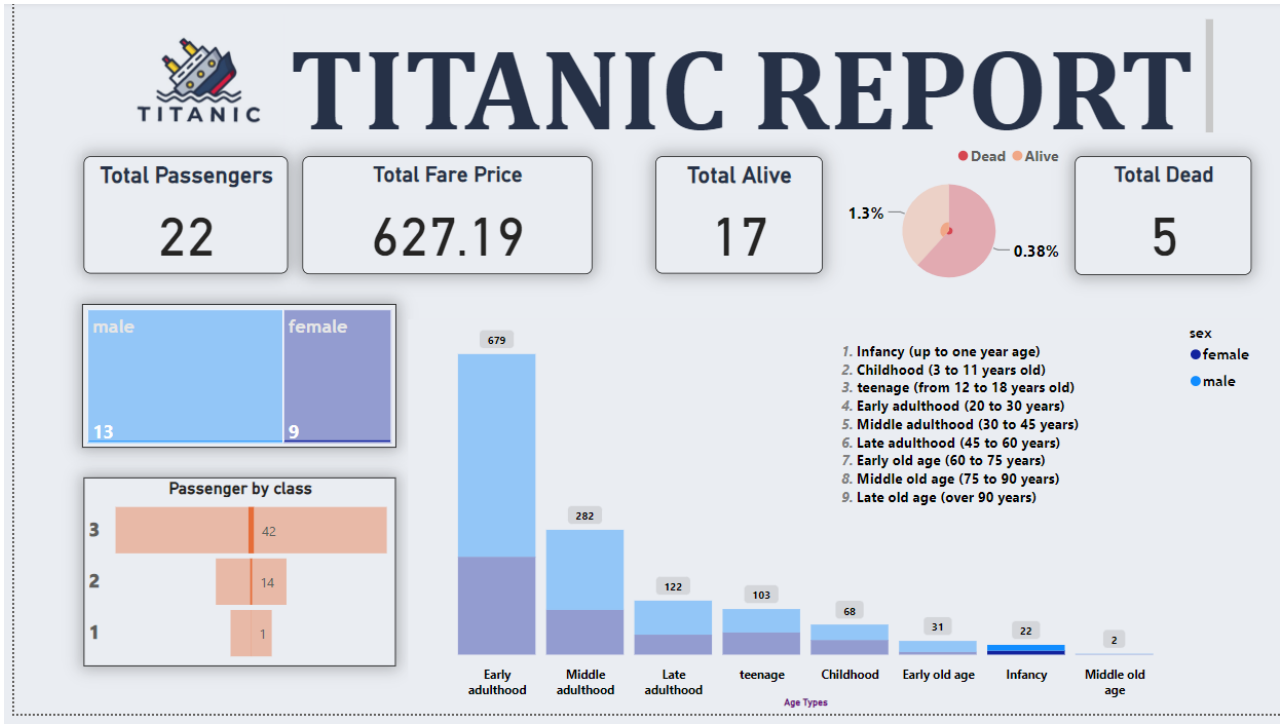

TITANIC REPORT
TITANIC
Total Passengers
323
Total Fare Price
28,265.40
Total Alive
200
Total Dead
123
Dead Alive
15.28%
9.4%
male
female
179
144
Passenger by class
3
2
1
2127
554
323
679
282
122
103
68
31
22
2
Early adulthood
Middle adulthood
Late adulthood
teenage
Childhood
Early old age
Infancy
Middle old age
Age Types
1. Infancy (up to one year age)
2. Childhood (3 to 11 years old)
3. teenage (from 12 to 18 years old)
4. Early adulthood (20 to 30 years)
5. Middle adulthood (30 to 45 years)
6. Late adulthood (45 to 60 years)
7. Early old age (60 to 75 years)
8. Middle old age (75 to 90 years)
9. Late old age (over 90 years)
sex
female
male

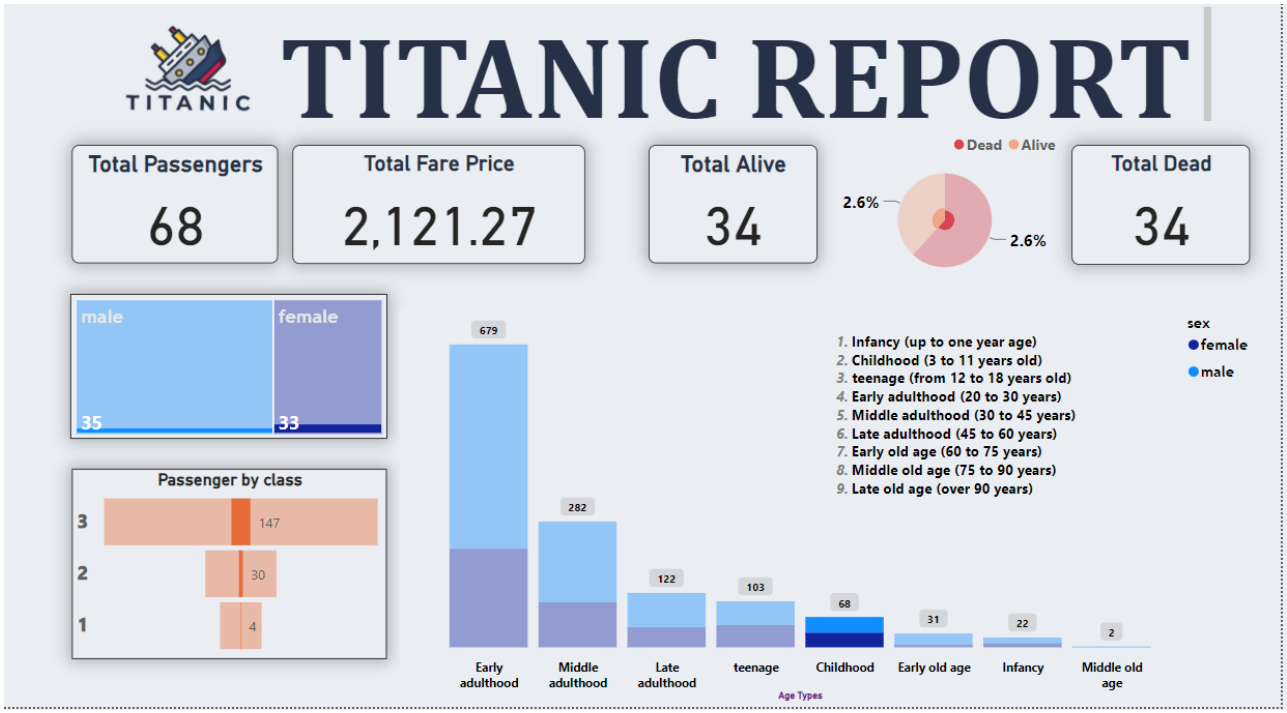

TITANIC REPORT
TITANIC
Total Passengers
277
Total Fare Price
5,866.64
Total Alive
119
Total Dead
158
Dead Alive
9.09%
12.07...
male
female
171
106
Passenger by class
3
2
1
2127
554
323
679
282
122
103
68
31
22
2
Early adulthood
Middle adulthood
Late adulthood
teenage
Childhood
Early old age
Infancy
Middle old age
Age Types
1. Infancy (up to one year age)
2. Childhood (3 to 11 years old)
3. teenage (from 12 to 18 years old)
4. Early adulthood (20 to 30 years)
5. Middle adulthood (30 to 45 years)
6. Late adulthood (45 to 60 years)
7. Early old age (60 to 75 years)
8. Middle old age (75 to 90 years)
9. Late old age (over 90 years)
sex
female
male

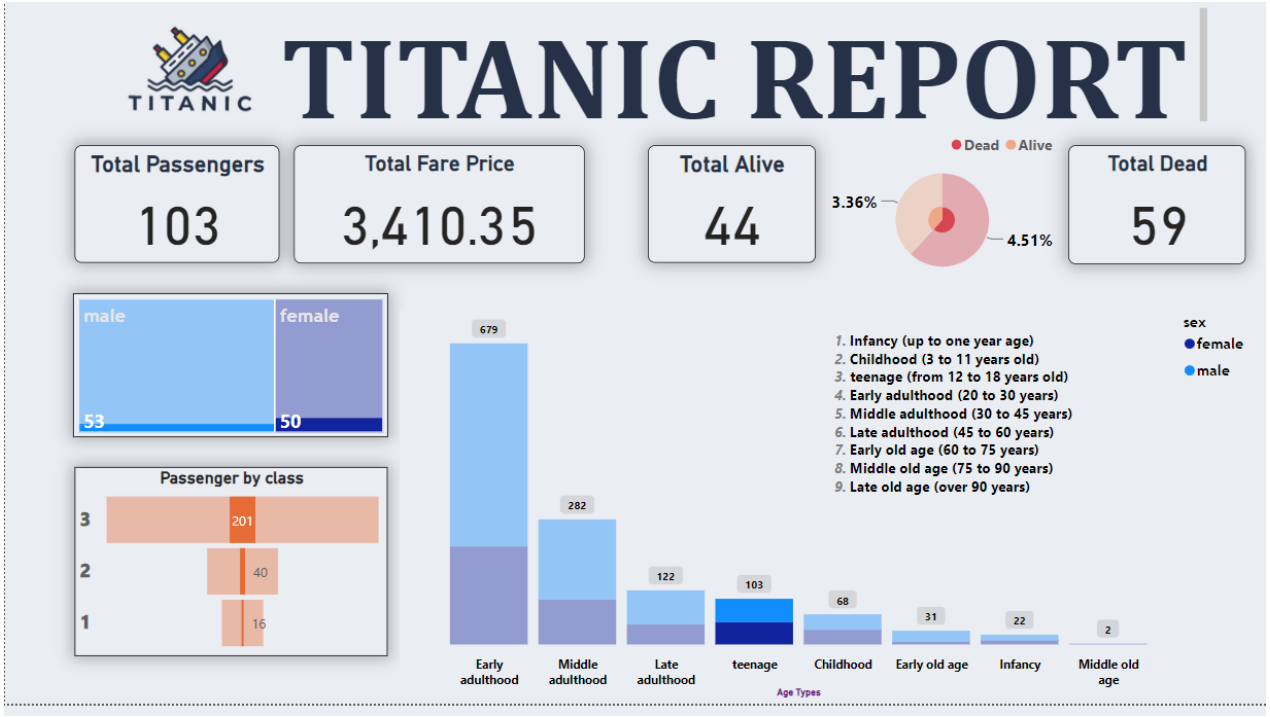

TITANIC REPORT
TITANIC
Total Passengers
709
Total Fare Price
9,451.74
Total Alive
181
Total Dead
528
Dead Alive
13.83%
40.34...
male
female
493
216
Passenger by class
3
2
1
2127
554
323
679
282
122
103
68
31
22
2
Early adulthood
Middle adulthood
Late adulthood
teenage
Childhood
Early old age
Infancy
Middle old age
Age Types
1. Infancy (up to one year age)
2. Childhood (3 to 11 years old)
3. teenage (from 12 to 18 years old)
4. Early adulthood (20 to 30 years)
5. Middle adulthood (30 to 45 years)
6. Late adulthood (45 to 60 years)
7. Early old age (60 to 75 years)
8. Middle old age (75 to 90 years)
9. Late old age (over 90 years)
sex
female
male

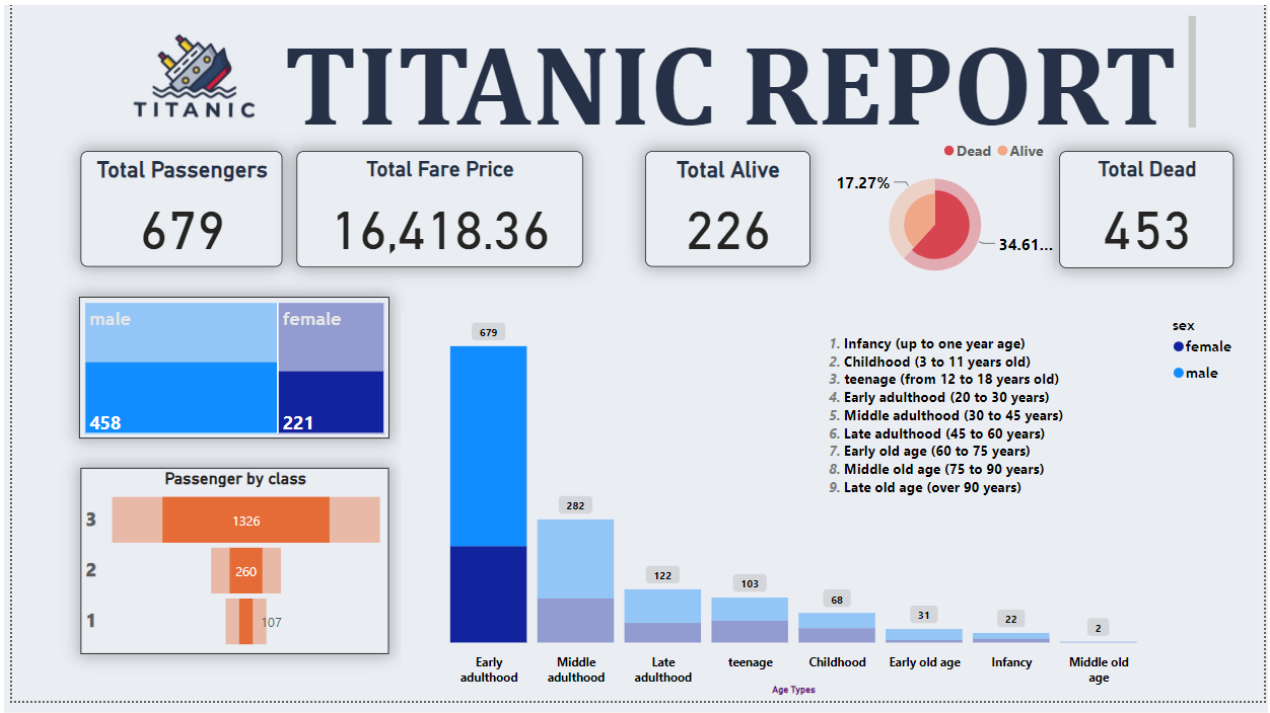
Classification based on Age Categories

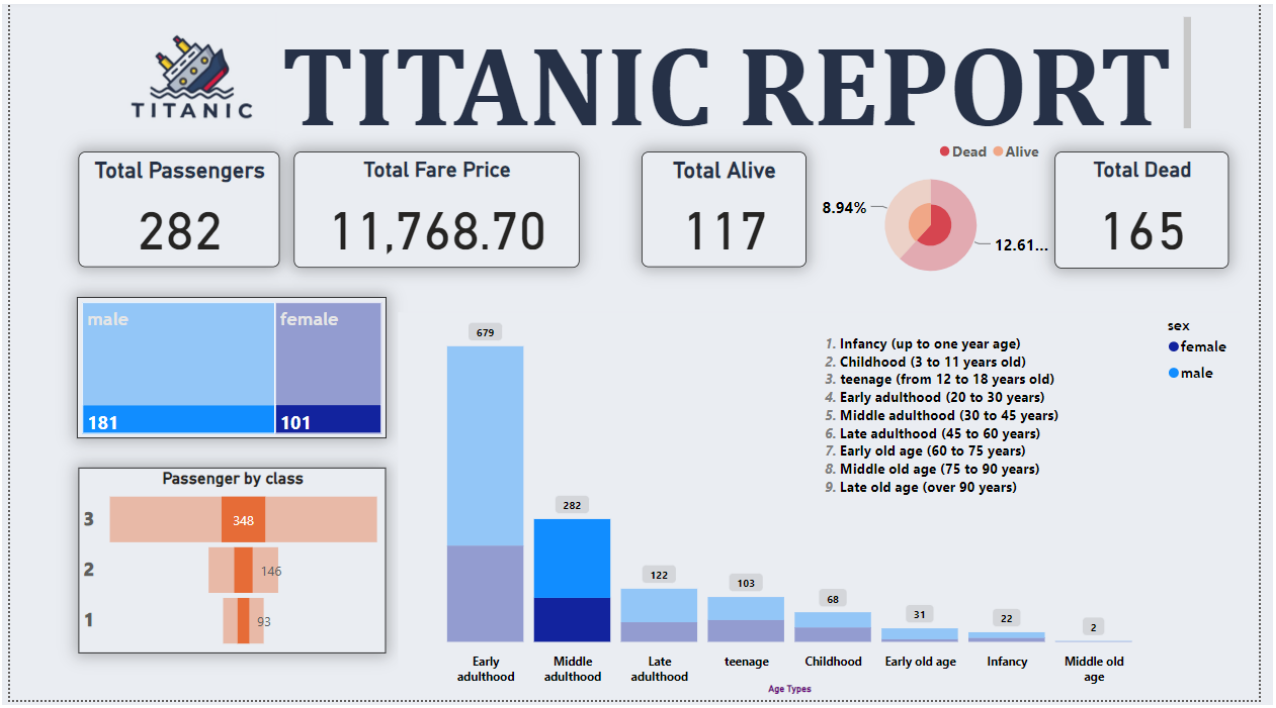
1. **Infancy (neonate and up to one year age)**
2. **Childhood (3 to 11 years old)**
3. **Adolescence or teenage (from 12 to 18 years old)**
4. **Early adulthood (20 to 30 years)**
5. **Middle adulthood (30 to 45 years)**
6. **Late adulthood (45 to 60 years)**
7. **Early old age (60 to 75 years)**
8. **Middle old age (75 to 90 years)**
9. **Late old age (over 90 years)**

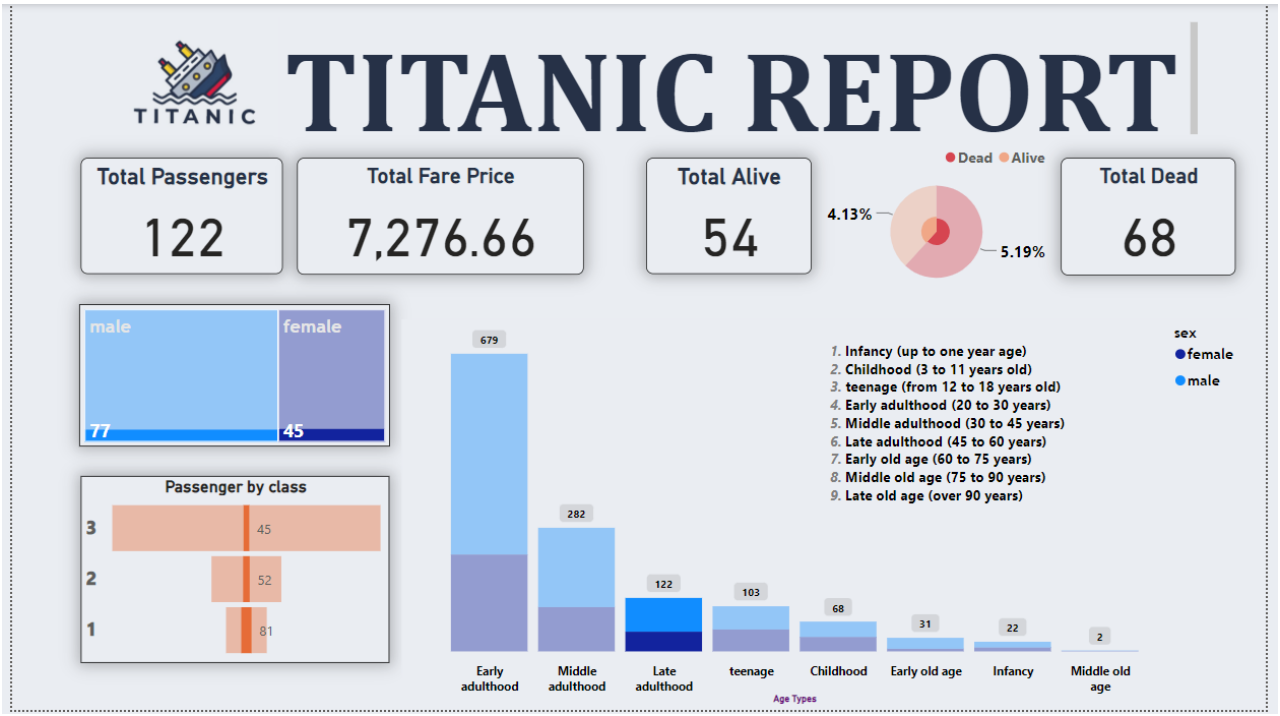

TITANIC
TITANIC REPORT
Total Passengers
22
Total Fare Price
627.19
Total Alive
17
Dead Alive
1.3%
0.38%
Total Dead
5
male
female
13
9
Passenger by class
3
2
1
42
14
1
679
282
122
103
68
31
22
2
Early adulthood
Middle adulthood
Late adulthood
teenage
Childhood
Early old age
Infancy
Middle old age
Age Types
1. Infancy (up to one year age)
2. Childhood (3 to 11 years old)
3. teenage (from 12 to 18 years old)
4. Early adulthood (20 to 30 years)
5. Middle adulthood (30 to 45 years)
6. Late adulthood (45 to 60 years)
7. Early old age (60 to 75 years)
8. Middle old age (75 to 90 years)
9. Late old age (over 90 years)
sex
female
male

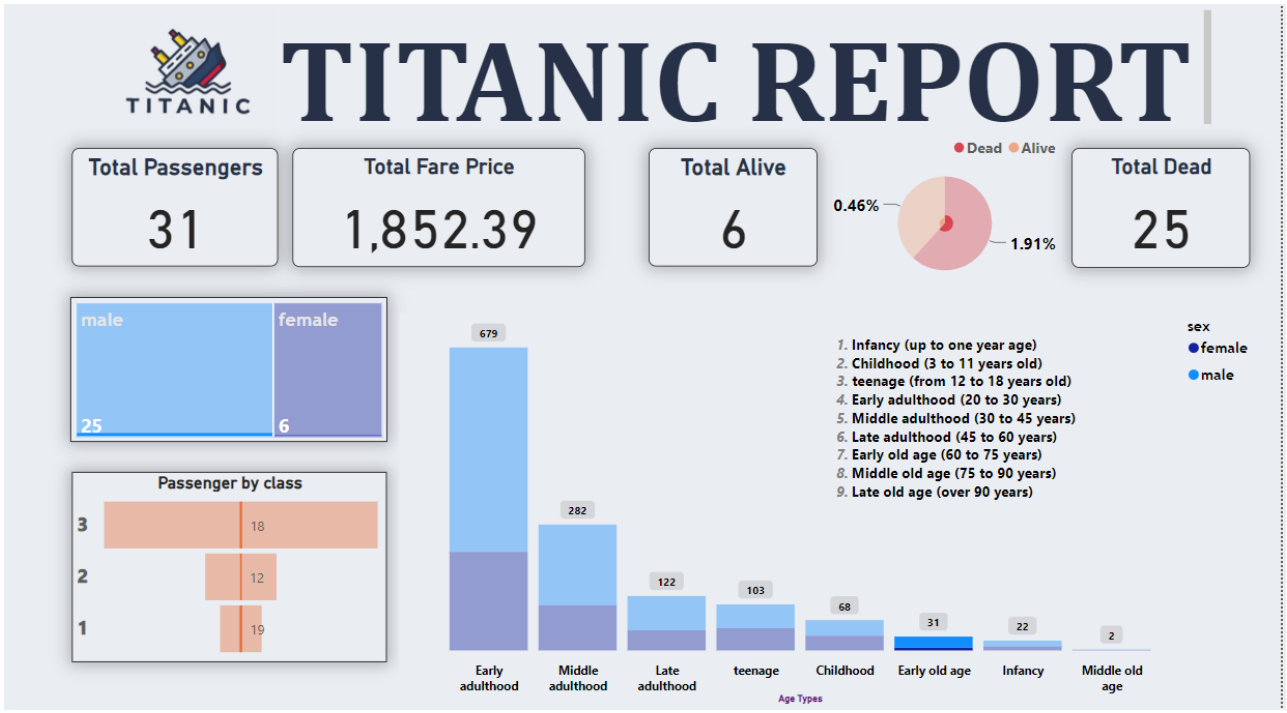

TITANIC
TITANIC REPORT
Total Passengers
68
Total Fare Price
2,121.27
Total Alive
34
Dead Alive
2.6%
2.6%
Total Dead
34
male
female
35
33
Passenger by class
3
2
1
147
30
4
679
282
122
103
68
31
22
2
Early adulthood
Middle adulthood
Late adulthood
teenage
Childhood
Early old age
Infancy
Middle old age
Age Types
1. Infancy (up to one year age)
2. Childhood (3 to 11 years old)
3. teenage (from 12 to 18 years old)
4. Early adulthood (20 to 30 years)
5. Middle adulthood (30 to 45 years)
6. Late adulthood (45 to 60 years)
7. Early old age (60 to 75 years)
8. Middle old age (75 to 90 years)
9. Late old age (over 90 years)
sex
female
male

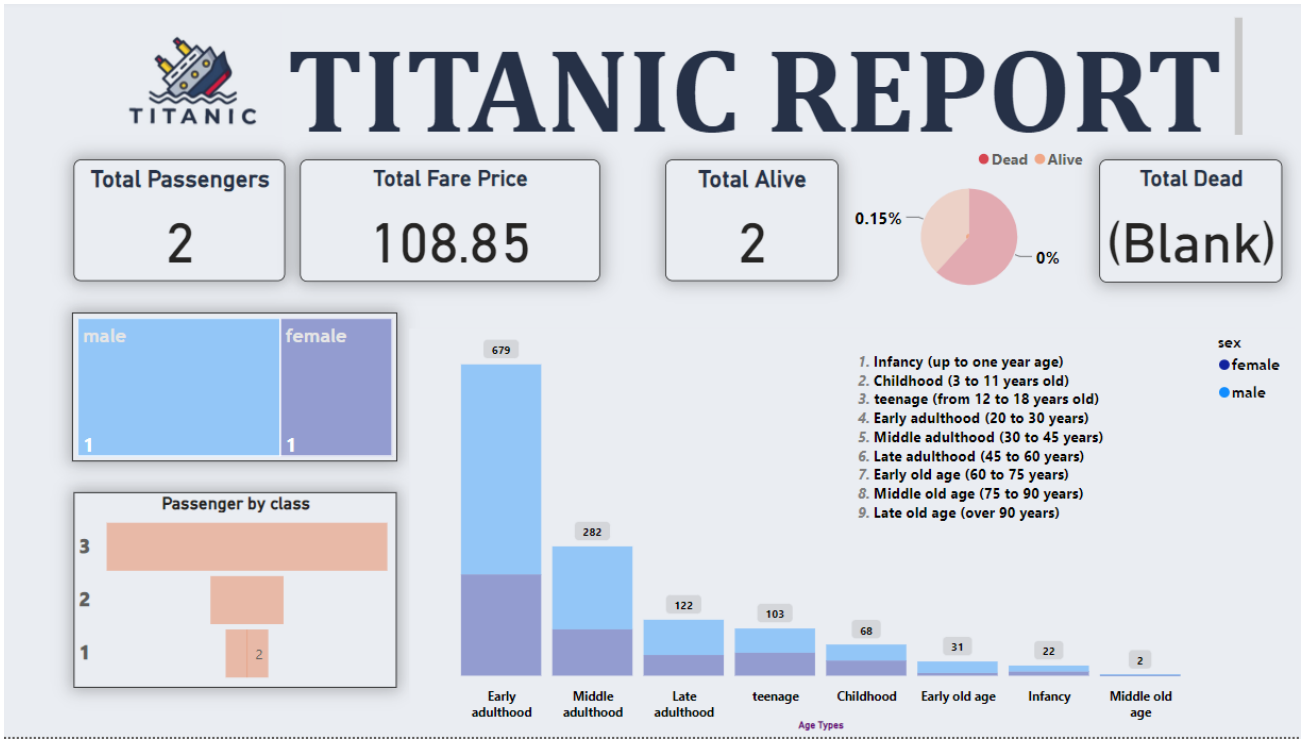

TITANIC
TITANIC REPORT
Total Passengers
103
Total Fare Price
3,410.35
Total Alive
44
Dead
Alive
3.36%
4.51%
Total Dead
59
male
female
53
50
Passenger by class
3
2
1
201
40
16
679
282
122
103
68
31
22
2
Early adulthood
Middle adulthood
Late adulthood
teenage
Childhood
Early old age
Infancy
Middle old age
Age Types
1. Infancy (up to one year age)
2. Childhood (3 to 11 years old)
3. teenage (from 12 to 18 years old)
4. Early adulthood (20 to 30 years)
5. Middle adulthood (30 to 45 years)
6. Late adulthood (45 to 60 years)
7. Early old age (60 to 75 years)
8. Middle old age (75 to 90 years)
9. Late old age (over 90 years)
sex
female
male


TITANIC
TITANIC REPORT
Total Passengers
679
Total Fare Price
16,418.36
Total Alive
226
Dead
Alive
17.27%
34.61...
Total Dead
453
male
female
458
221
Passenger by class
3
2
1
1326
260
107
679
282
122
103
68
31
22
2
Early adulthood
Middle adulthood
Late adulthood
teenage
Childhood
Early old age
Infancy
Middle old age
Age Types
1. Infancy (up to one year age)
2. Childhood (3 to 11 years old)
3. teenage (from 12 to 18 years old)
4. Early adulthood (20 to 30 years)
5. Middle adulthood (30 to 45 years)
6. Late adulthood (45 to 60 years)
7. Early old age (60 to 75 years)
8. Middle old age (75 to 90 years)
9. Late old age (over 90 years)
sex
female
male

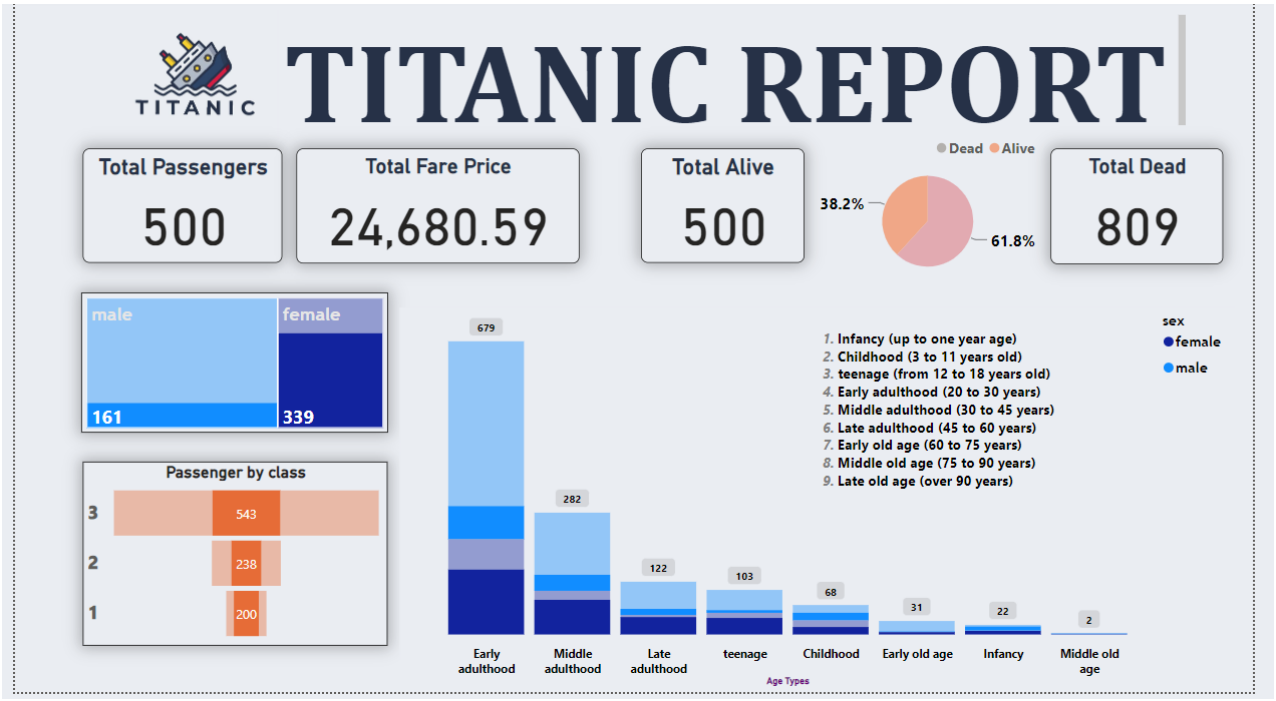

TITANIC
TITANIC REPORT
Total Passengers
282
Total Fare Price
11,768.70
Total Alive
117
Dead
Alive
8.94%
12.61...
Total Dead
165
male
female
181
101
Passenger by class
3
2
1
348
146
93
679
282
122
103
68
31
22
2
Early adulthood
Middle adulthood
Late adulthood
teenage
Childhood
Early old age
Infancy
Middle old age
Age Types
1. Infancy (up to one year age)
2. Childhood (3 to 11 years old)
3. teenage (from 12 to 18 years old)
4. Early adulthood (20 to 30 years)
5. Middle adulthood (30 to 45 years)
6. Late adulthood (45 to 60 years)
7. Early old age (60 to 75 years)
8. Middle old age (75 to 90 years)
9. Late old age (over 90 years)
sex
female
male

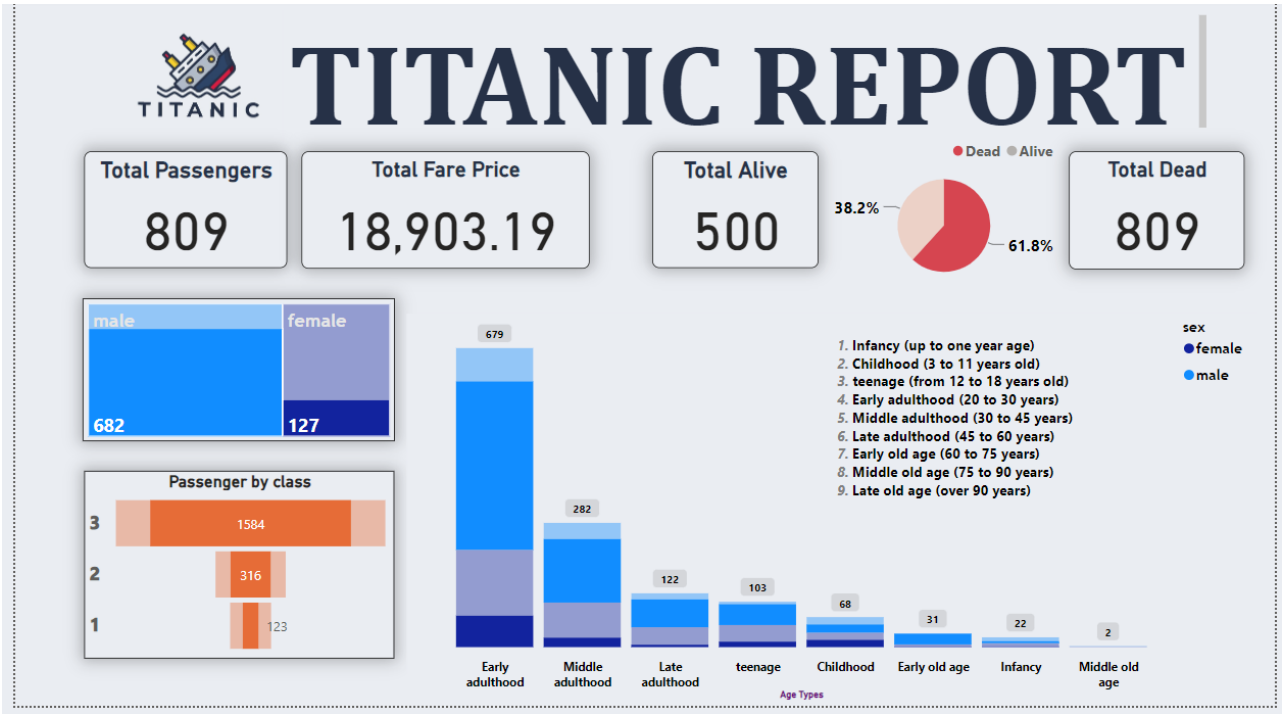

TITANIC
TITANIC REPORT
Total Passengers
122
Total Fare Price
7,276.66
Total Alive
54
Dead
Alive
4.13%
5.19%
Total Dead
68
male
female
77
45
Passenger by class
3
2
1
45
52
81
679
282
122
103
68
31
22
2
Early adulthood
Middle adulthood
Late adulthood
teenage
Childhood
Early old age
Infancy
Middle old age
Age Types
1. Infancy (up to one year age)
2. Childhood (3 to 11 years old)
3. teenage (from 12 to 18 years old)
4. Early adulthood (20 to 30 years)
5. Middle adulthood (30 to 45 years)
6. Late adulthood (45 to 60 years)
7. Early old age (60 to 75 years)
8. Middle old age (75 to 90 years)
9. Late old age (over 90 years)
sex
female
male


TITANIC
TITANIC REPORT
Total Passengers
31
Total Fare Price
1,852.39
Total Alive
6
Dead
Alive
0.46%
1.91%
Total Dead
25
male
female
25
6
Passenger by class
3
2
1
18
12
19
679
282
122
103
68
31
22
2
Early adulthood
Middle adulthood
Late adulthood
teenage
Childhood
Early old age
Infancy
Middle old age
Age Types
1. Infancy (up to one year age)
2. Childhood (3 to 11 years old)
3. teenage (from 12 to 18 years old)
4. Early adulthood (20 to 30 years)
5. Middle adulthood (30 to 45 years)
6. Late adulthood (45 to 60 years)
7. Early old age (60 to 75 years)
8. Middle old age (75 to 90 years)
9. Late old age (over 90 years)
sex
female
male


TITANIC
TITANIC REPORT
Total Passengers
2
Total Fare Price
108.85
Total Alive
2
Dead
Alive
0.15%
0%
Total Dead
(Blank)
male
female
1
1
Passenger by class
3
2
1
2
679
282
122
103
68
31
22
2
Early adulthood
Middle adulthood
Late adulthood
teenage
Childhood
Early old age
Infancy
Middle old age
Age Types
1. Infancy (up to one year age)
2. Childhood (3 to 11 years old)
3. teenage (from 12 to 18 years old)
4. Early adulthood (20 to 30 years)
5. Middle adulthood (30 to 45 years)
6. Late adulthood (45 to 60 years)
7. Early old age (60 to 75 years)
8. Middle old age (75 to 90 years)
9. Late old age (over 90 years)
sex
female
male

Classification based on Alive and Dead


TITANIC
TITANIC REPORT
Total Passengers
500
Total Fare Price
24,680.59
Total Alive
500
Dead Alive
38.2%
61.8%
Total Dead
809
male
female
161
339
Passenger by class
3
2
1
543
238
200
679
282
122
103
68
31
22
2
Early adulthood
Middle adulthood
Late adulthood
teenage
Childhood
Early old age
Infancy
Middle old age
Age Types
1. Infancy (up to one year age)
2. Childhood (3 to 11 years old)
3. teenage (from 12 to 18 years old)
4. Early adulthood (20 to 30 years)
5. Middle adulthood (30 to 45 years)
6. Late adulthood (45 to 60 years)
7. Early old age (60 to 75 years)
8. Middle old age (75 to 90 years)
9. Late old age (over 90 years)
sex
female
male


TITANIC
TITANIC REPORT
Total Passengers
809
Total Fare Price
18,903.19
Total Alive
500
Dead Alive
38.2%
61.8%
Total Dead
809
male
female
682
127
Passenger by class
3
2
1
1584
316
123
679
282
122
103
68
31
22
2
Early adulthood
Middle adulthood
Late adulthood
teenage
Childhood
Early old age
Infancy
Middle old age
Age Types
1. Infancy (up to one year age)
2. Childhood (3 to 11 years old)
3. teenage (from 12 to 18 years old)
4. Early adulthood (20 to 30 years)
5. Middle adulthood (30 to 45 years)
6. Late adulthood (45 to 60 years)
7. Early old age (60 to 75 years)
8. Middle old age (75 to 90 years)
9. Late old age (over 90 years)
sex
female
male