Import library & datasets

```
import pandas as pd
import numpy as np
```

```
df = pd.read_csv('/content/titanic_datasets.csv',usecols=['Age','Pclass',"Fare",'Survived'])
df.head()
```

	Survived	Pclass	Age	Fare
0	0	3	34.5	7.8292
1	1	3	47.0	7.0000
2	0	2	62.0	9.6875
3	0	3	27.0	8.6625
4	1	3	22.0	12.2875

Next steps: Generate code with df | New interactive sheet

```
df.isnull().mean()*100
```

	0
Survived	0.000000
Pclass	0.000000
Age	20.574163
Fare	0.239234

dtype: float64

Train_Test_splits

```
x = df.drop(columns=['Survived'])
y = df['Survived']
```

```
from sklearn.model_selection import train_test_split
```

```
x_train , x_test ,y_train , y_test = train_test_split(x,y,test_size=0.2,random_state=2)
```

```
x_train.head(3)
```

	Pclass	Age	Fare
280	3	23.0	8.6625
284	3	2.0	20.2125
40	3	39.0	13.4167

Next steps: Generate code with x_train | New interactive sheet

Close

KNN Imputer

KNN Imputer

```
from sklearn.impute import KNNImputer
```

```
knn = KNNImputer()
x_train_trf = knn.fit_transform(x_train)
x_test_trf = knn.transform(x_test)
```

```
x_train_trf = pd.DataFrame(x_train_trf,columns=x_train.columns)
x_test_trf = pd.DataFrame(x_test_trf , columns=x_test.columns)
```

```
x_test_trf.head()
```

	Pclass	Age	Fare
0	3.0	23.0	8.6625
1	3.0	2.0	20.2125
2	3.0	39.0	13.4167
3	3.0	21.0	7.2250
4	2.0	31.0	21.0000

Next steps: Generate code with x_test_trf | New interactive sheet

```
x_train_trf.head()
```

	Pclass	Age	Fare
0	3.0	23.0	8.6625
1	3.0	2.0	20.2125
2	3.0	39.0	13.4167
3	3.0	21.0	7.2250
4	2.0	31.0	21.0000

Next steps: Generate code with `x_train_trf` New interactive sheet

Iterative imputer

```
from sklearn.experimental import enable_iterative_imputer
from sklearn.impute import IterativeImputer
imp = IterativeImputer(
    max_iter=10,
    random_state=42
)

x_train_imp = imp.fit_transform(x_train)
x_test_imp  = imp.transform(x_test)
```

```
x_train_imp = pd.DataFrame(x_train)
x_test_imp = pd.DataFrame(x_test)
```

```
x_train_imp
```

	Pclass	Age	Fare
280	3	23.0	8.6625
284	3	2.0	20.2125
40	3	39.0	13.4167
17	3	21.0	7.2250
362	2	31.0	21.0000
...	...	...	...
299	3	29.0	7.8542
22	1	NaN	31.6833
72	3	29.0	7.9250
15	2	24.0	27.7208
168	1	NaN	27.7208

334 rows × 3 columns

Next steps: Generate code with `x_train_imp` New interactive sheet