

Load the titanic dataset and convert it into a data frame.

Aim: To perform basic programming explaining data analysis on the titanic dataset using pandas, seaborn and sklearn.

PROCEDURE

- Step 1: Load the titanic dataset into a dataframe.
- Step 2: Display the first few rows using head.
- Step 3: Explore its datatype and check for missing values using and shell, scan();
- Step 4: Apply forward fill & backward fill method to the age column.
- Step 5: Remove any duplicate rows.
- Step 6: Encode the sex col until label encoder.
- Step 7: Create a pair plot for Decoder.
- Step 8: Display conclusion for map.

code:

```
import pandas as pd.  
import seaborn as sns  
import matplotlib.pyplot as plt  
from sklearn.preprocessing import LabelStandard  
Scale.
```

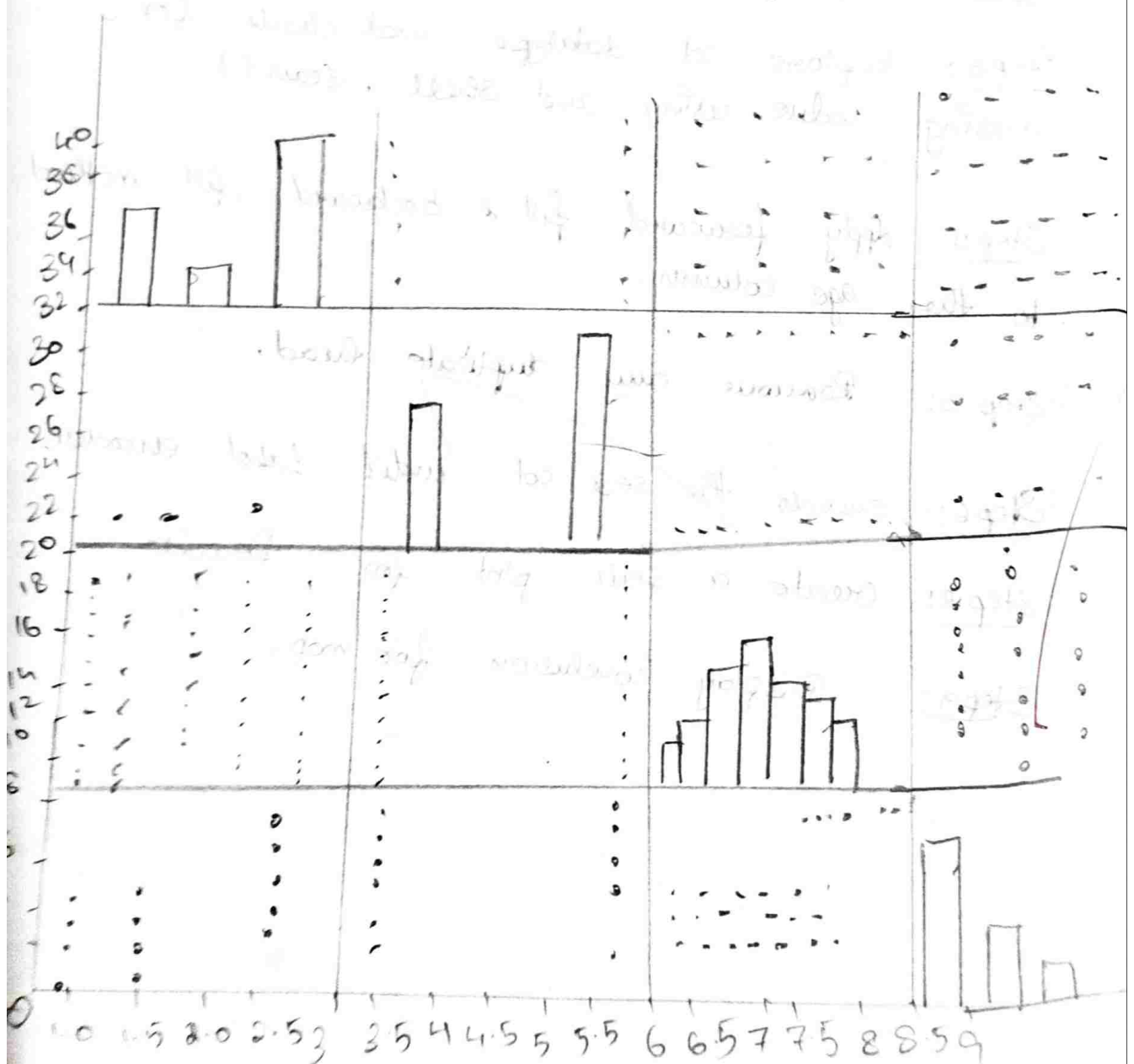
```
df = sns.load_dataset('titanic')  
print (C' First 5 Rows')  
display (df.head())  
print ("In Data Info")  
df.info()  
df['age'] = df['age'].fillna(method: (fill))  
df['age'] = df['age'].fillna(method: bfill)  
df['deck'] = df['deck'].cat.add_categories  
('unknown')
```

```
df = df.drop_duplicates()  
le = LabelEncoder()  
df['sex'] = le.fit_transform(df['sex'].astype(str))  
scaler = StandardScaler()  
df['fare'] = scaler.fit_transform(df['fare'].fillna(0))  
sns.pairplot(df[['pclass', 'sex', 'age']])  
plt.show()  
plt.figure(figsize=(8,6))  
plt.title("Correlation Heat map")  
plt.show.
```

Output:

First, Group

Survived	class	sex	age	sibs	fare	emb	class
0	3	M	22	10	7.2	S	Third
1	1	F	38	10	11.2	C	First
1	3	F	26	0	7.9	S	Third
1	1	F	35	10	53.10	S	First
0	3	M	35	0	8.0	S	Third



Category	Sub-category 1	Sub-category 2	Sub-category 3	Sub-category 4
1	1	1	1	1
2	1	1	1	1
3	1	1	1	1
4	1	1	1	1
5	1	1	1	1
6	1	1	1	1
7	1	1	1	1
8	1	1	1	1

{ Variables of Dataset } Variables added

Category	Sub-category 1	Sub-category 2	Sub-category 3	Sub-category 4
1	1	1	1	1
2	1	1	1	1
3	1	1	1	1
4	1	1	1	1
5	1	1	1	1
6	1	1	1	1
7	1	1	1	1
8	1	1	1	1

Result: Load the Titanic dataset and convert it into a dataframe is completed successfully.