```python
import pandas as pd
import numpy as np
from sklearn.impute import SimpleImputer
from sklearn.preprocessing import LabelEncoder
from sklearn.preprocessing import MinMaxScaler
from sklearn.model_selection import train_test_split


# Reading Dataset
heart_failure = pd.read_csv('/content/heart failur classification dataset.csv')
heart_failure


# Finding Shape
heart_failure.shape


# Identify Null
heart_failure.isnull().sum()


# Handle Missing Values
impute = SimpleImputer(missing_values=np.nan, strategy='mean')
impute.fit(heart_failure[['serum_sodium']])
heart_failure['serum_sodium'] = impute.transform(heart_failure[['serum_sodium']])
impute.fit(heart_failure[['time']])
heart_failure['time'] = impute.transform(heart_failure[['time']])
heart_failure.isnull().sum()


# Encode Categorical Features
label = LabelEncoder()
heart_failure['sex'] = label.fit_transform(heart_failure['sex'])
heart_failure['smoking'] = label.fit_transform(heart_failure['smoking'])
heart_failure
```

```python
# Scale All the Values Between 0-1
scaler = MinMaxScaler()
scaler.fit(heart_failure)
data_number = scaler.fit_transform(heart_failure)
data_number


# Split The Dataset into Features and Labels
x, y = heart_failure.iloc[:, :-1], heart_failure.iloc[:, [-1]]
X_train, X_test, y_train, y_test = train_test_split(x, y,

                                    random_state=1)


print(x.shape)
print(y.shape)
```