```
import numpy as np
import pandas as pd
#create dataframe


df = pd.DataFrame({'team':['A','A','B','B','B','B','C','C'],
                   'points':[25,12,15,14,19,23,25,29]})
print(df)
```

```
  team  points
0    A      25
1    A      12
2    B      15
3    B      14
4    B      19
5    B      23
6    C      25
7    C      29
```

one hot encoding

```
from sklearn.preprocessing import OneHotEncoder


encoder = OneHotEncoder(handle_unknown='ignore')
encoder_df = pd.DataFrame(encoder.fit_transform(df[['team']]).toarray())
final_df = df.join(encoder_df)
print(final_df)
```

```
  team  points    0    1    2
0    A      25  1.0  0.0  0.0
1    A      12  1.0  0.0  0.0
2    B      15  0.0  1.0  0.0
3    B      14  0.0  1.0  0.0
4    B      19  0.0  1.0  0.0
5    B      23  0.0  1.0  0.0
6    C      25  0.0  0.0  1.0
7    C      29  0.0  0.0  1.0
```

```
df1 = pd.DataFrame({'Gender':['M','M','F','M','F','F','M','F','M','F'],
                   'Degree':['BCOM','BTECH','BCA','BTECH','BCOM','BTECH','BCA','BCOM','BCA'
                   'Age':[24,25,24,25,30,38,23,29,29,21]})


gencoder = OneHotEncoder(handle_unknown='ignore')
gencoder_df = pd.DataFrame(encoder.fit_transform(df1[['Gender','Degree']]).toarray())
```

```
final_df1 = df1.join(gencoder_df)
print(final_df1)
```

```
  Gender Degree  Age    0    1    2    3    4
0      M   BCOM   24  0.0  1.0  0.0  1.0  0.0
1      M  BTECH   25  0.0  1.0  0.0  0.0  1.0
2      F    BCA   24  1.0  0.0  1.0  0.0  0.0
3      M  BTECH   25  0.0  1.0  0.0  0.0  1.0
4      F   BCOM   30  1.0  0.0  0.0  1.0  0.0
5      F  BTECH   38  1.0  0.0  0.0  0.0  1.0
6      M    BCA   23  0.0  1.0  1.0  0.0  0.0
7      F   BCOM   29  1.0  0.0  0.0  1.0  0.0
8      M    BCA   29  0.0  1.0  1.0  0.0  0.0
9      F  BTECH   21  1.0  0.0  0.0  0.0  1.0
```

```
bridge_types = ('Arch','Bean','Truss','Cantilever','Tied Arch','Suspention','Cable')
bridge_df = pd.DataFrame(bridge_types,columns=['Bridge_Types'])
enc = OneHotEncoder(handle_unknown='ignore')
enc_df = pd.DataFrame(enc.fit_transform(bridge_df[['Bridge_Types']]).toarray())
bridge_df = bridge_df.join(enc_df)
print(bridge_df)
```

```
  Bridge_Types    0    1    2    3    4    5    6
0         Arch  1.0  0.0  0.0  0.0  0.0  0.0  0.0
1         Bean  0.0  1.0  0.0  0.0  0.0  0.0  0.0
2        Truss  0.0  0.0  0.0  0.0  0.0  0.0  1.0
3   Cantilever  0.0  0.0  0.0  1.0  0.0  0.0  0.0
4    Tied Arch  0.0  0.0  0.0  0.0  0.0  1.0  0.0
5   Suspention  0.0  0.0  0.0  0.0  1.0  0.0  0.0
6        Cable  0.0  0.0  1.0  0.0  0.0  0.0  0.0
```

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