```
                """PROJECT = 1"""

               """SHOOPING_CUSTOMERDATA"""

"""if a:=input("Entre a Customer ID:"):
   b=input("Entre a CustomerGender:")

   a=="1001" and b=="Male"
   print("Hello")"""

"""if(a:=input("Entre a Customer ID:")):
   b=input("Entre a CustomerGender:")
   score=int(input("Entre your score:"))
else: score==653
print("High score")"""

"""if(a:=input("Entre a Customer ID:")):
   b=input("Entre a CustomerGender:")
   score=int(input("Entre your score:"))
else: score==567
print("Low score")"""


"""def function(CustomerAge,CustomerCity):
 print("Hello")
 c= str(CustomerAge)+CustomerCity
 return c

n=function(CustomerAge=49,CustomerCity="Chennai")
print(n)"""

"""def Function (CustomerID,AnnualIncome,CustomerCityID):
  print("Hello")
  c= CustomerID+AnnualIncome+CustomerCityID
  return c

n=Function(CustomerID=1020,AnnualIncome=353525.8767,CustomerCityID=1)
print(n)"""

"""import pandas as  pd
Shopping_CustomerData=pd.read_excel("C:\\Users\\SIRISHA
M\\OneDrive\\Documents\\Shopping_CustomerData.xlsx")
print(Shopping_CustomerData)"""

"""import numpy as np
import pandas as pd
from sklearn import preprocessing

csv_data = pd.read_excel("C:\\Users\\SIRISHA
M\\OneDrive\\Documents\\Shopping_CustomerData.xlsx")
```

```
array = csv_data.values
X = array[:,2:5]#separate features from dataset.
Y = array[:,0:1]#separate clase from dataset

dataset=pd.DataFrame({"CustomerID":array[:,0],"CustomerGender":array[:,1],"Customer
Age":array[:,1]})
print("Dataset Before Normalization:")
print(dataset.head(10))"""

"""import numpy as np
import pandas as pd
from sklearn import preprocessing

# In a real-world scenario, you would ensure the file path is correct.
# Assuming 'Shopping_CustomerData.xlsx' is in the same directory as the script.
try:
    csv_data = pd.read_excel("Shopping_CustomerData.xlsx")
except FileNotFoundError:
    print("Error: The file 'Shopping_CustomerData.xlsx' was not found.")
    # You could use a mock DataFrame for demonstration if the file is missing
    csv_data = pd.DataFrame({
        "CustomerCity": ["CityA", "CityB", "CityC", "CityD"],
        "CustomerCityID": [101, 102, 103, 104],
        "Age": [25, 35, 45, 55],
        "Annual Income (k$)": [30, 45, 60, 75],
        "SpendingScore": [40, 50, 60, 70]
    })

array = csv_data.values
X = array[:, 2:5]

# This is the correct way to construct the initial DataFrame
dataset = pd.DataFrame(X, columns=["Age", "Annual Income (k$)", "SpendingScore"])

min_max_scaler = preprocessing.MinMaxScaler(feature_range=(0, 1))
data_scaled = min_max_scaler.fit_transform(dataset)

# This is where the normalized dataset is created
dataset_normalized = pd.DataFrame(data_scaled, columns=dataset.columns)

print("Dataset before normalization (first 10 rows):")
print(dataset.head(10))

print("\nDataset after normalization (first 10 rows):")
print(dataset_normalized.head(10))"""

"""import pandas as pd
csv_data=pd.read_excel("C:\\Users\\SIRISHA
M\\OneDrive\\Documents\\Shopping_CustomerData.xlsx")
print(csv_data)"""
```

```
"""import pandas as pd
Shopping_Customer_Data ={
'Customer ID':['1001','1002','1003','1004','1004','1006','1007','1008','1009'],
'CustomerGender
':['Male','Male','Felame','Felame','Felame','Felame','Felame','Felame','Male'],
'CustomerAge': ['49','59','67','89','67','87','96','99','75'],
'CustomerCity':['Chennai','Delhi','Delhi','Kolkata','Mumbai','Chennai','Chennai','M
umbai','Chennai'],
'AnnualIncome ':['527547.5885   653','207143.1976       630','164423.8457
555','56220.36443       699     ','256194.3619  793     ','475324.8903
635','186352.3482       881     ','414233.1569  852     ','97263.51748  708'],
'CreditScore': ['78','63','69','30','6','97','2','77','22'],
'SpendingScore':['1','1','4','1','1','2','2','5','2']
}

Shopping_Customer_Data = pd.DataFrame(Shopping_Customer_Data)
print(Shopping_Customer_Data)"""

"""import pandas as pd
import numpy as np
Shopping_CustomerData = {
'CustomerGender':['Male','Male','Female','Female','Female','Female'],
'CustomerAge':['49','59','54','42','30','38'],
'CustomerCity':['Chennai','Delhi','Kolkata','Mumbai','Chennai',None],
'AnnualIncome':['527547.5885','475324.8903','256194.3619','56220.36443','207143.197
6',None],
}
df= pd.DataFrame(Shopping_CustomerData)
print("Original DataFrame:")
print(df)"""

"""import pandas as pd
import numpy as np
Shopping_CustomerData = {
'CustomerGender':['Male','Male','Female','Female','Female','Female'],
'CustomerAge':['49','59','54','42','30','38'],
'CustomerCity':['Chennai','Delhi','Kolkata','Mumbai','Chennai',None],
'AnnualIncome':['527547.5885','475324.8903','256194.3619','56220.36443','207143.197
6',None],
}

print(df)"""

"""import pandas as pd
import numpy as np
Shopping_CustomerData = {
'CustomerGender':['Male','Male','Female','Female','Female','Female'],
'CustomerAge':['49','59','54','42','30','38'],
'CustomerCity':['Chennai','Delhi','Kolkata','Mumbai','Chennai',None],
```

```
'AnnualIncome':['527547.5885','475324.8903','256194.3619','56220.36443','207143.197
6',None],
}
print("\nData Types:")
print(df.dtypes)"""

"""import pandas as pd
import numpy as np
Shopping_CustomerData = {
'CustomerGender':['Male','Male','Female','Female','Female','Female'],
'CustomerAge':['49','59','54','42','30','38'],
'CustomerCity':['Chennai','Delhi','Kolkata','Mumbai','Chennai',None],
'AnnualIncome':['527547.5885','475324.8903','256194.3619','56220.36443','207143.197
6',None],
}
print("\nMissing Values:")
print(df.isnull().sum())"""

"""import pandas as pd
import numpy as np
Shopping_CustomerData = {
'CustomerGender':['Male','Male','Female','Female','Female','Female'],
'CustomerAge':['49','59','54','42','30','38'],
'CustomerCity':['Chennai','Delhi','Kolkata','Mumbai','Chennai',None],
'AnnualIncome':['527547.5885','475324.8903','256194.3619','56220.36443','207143.197
6',None],
}
df_dropped = df.dropna()
print("\nDataFrame after dropping rows with missing values:")
print(df_dropped)"""

"""import pandas as pd
import numpy as np
Shopping_CustomerData = {
'CustomerGender':['Male','Male','Female','Female','Female','Female'],
'CustomerAge':['49','59','54','42','30','38'],
'CustomerCity':['Chennai','Delhi','Kolkata','Mumbai','Chennai',None],
'AnnualIncome':['527547.5885','475324.8903','256194.3619','56220.36443','207143.197
6',None],
}
df_filled = df.fillna('Unknown')
print("\nDataFrame after filling missing values with 'Unknown':")
print(df_filled)"""

"""import pandas as pd
import numpy as np
Shopping_CustomerData = {
'CustomerGender':['Male','Male','Female','Female','Female','Female'],
'CustomerAge':['49','59','54','42','30','38'],
'CustomerCity':['Chennai','Delhi','Kolkata','Mumbai','Chennai',None],
```

```
'AnnualIncome':['527547.5885','475324.8903','256194.3619','56220.36443','207143.197
6',None],
}
df['CustomerAge'] = df['CustomerAge'].astype(int)
print(df.dtypes)"""

"""import pandas as pd
import numpy as np
Shopping_CustomerData = {
'CustomerGender':['Male','Male','Female','Female','Female','Female'],
'CustomerAge':['49','59','54','42','30','38'],
'CustomerCity':['Chennai','Delhi','Kolkata','Mumbai','Chennai',None],
'AnnualIncome':['527547.5885','475324.8903','256194.3619','56220.36443','207143.197
6',None],
}
df['AnnualIncome'] = df['AnnualIncome'].astype(float)
print(df.dtypes)"""

"""import pandas as pd
import numpy as np
Shopping_CustomerData = {
'CustomerGender':['Male','Male','Female','Female','Female','Female'],
'CustomerAge':['49','59','54','42','30','38'],
'CustomerCity':['Chennai','Delhi','Kolkata','Mumbai','Chennai',None],
'AnnualIncome':['527547.5885','475324.8903','256194.3619','56220.36443','207143.197
6',None],
}
print("\nDataFrame after converting data types:")
print(df.dtypes)"""
```