SOURCE CODE

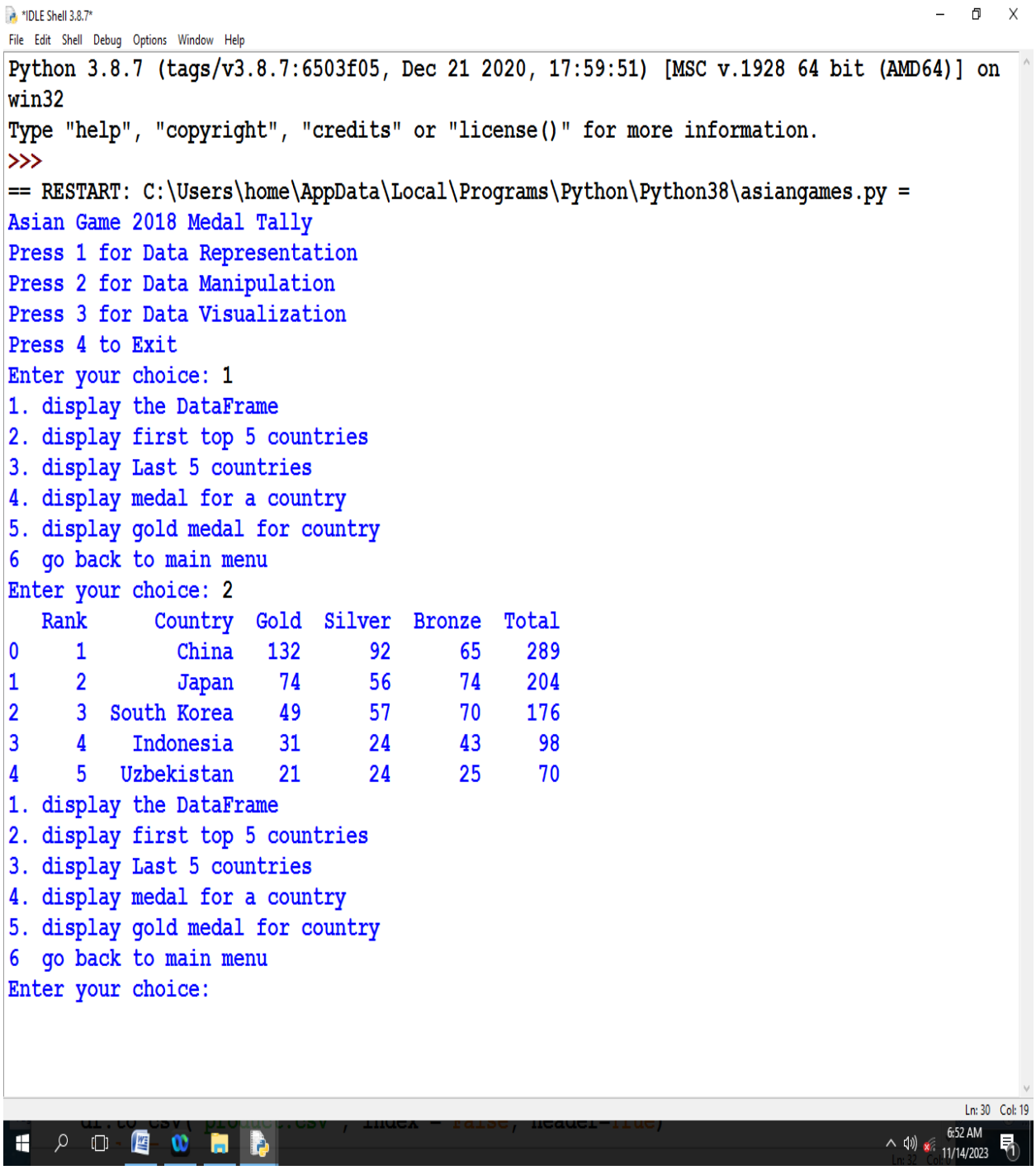
```
import matplotlib.pyplot as plt
import pandas as pd
import numpy as np


def vis():
    df=pd.read_csv("medal4.csv")
    while True:
        print("1. display the DataFrame")
        print("2. display first top 5 countries")
        print("3. display Last 5 countries")
        print("4. display medal for a country ")
        print("5. display gold medal for country")
        print("6  go back to main menu")
        ch1=int(input("Enter your choice: "))
        if ch1==1:
            print(df)
            print()
        elif ch1==2:
            print(df.head(5))
        elif ch1==3:
            print(df.tail(5))
        elif ch1==4:
            j=input("Enter the country name")
            print(df[df["Country"]==j])
        elif ch1==5:
```

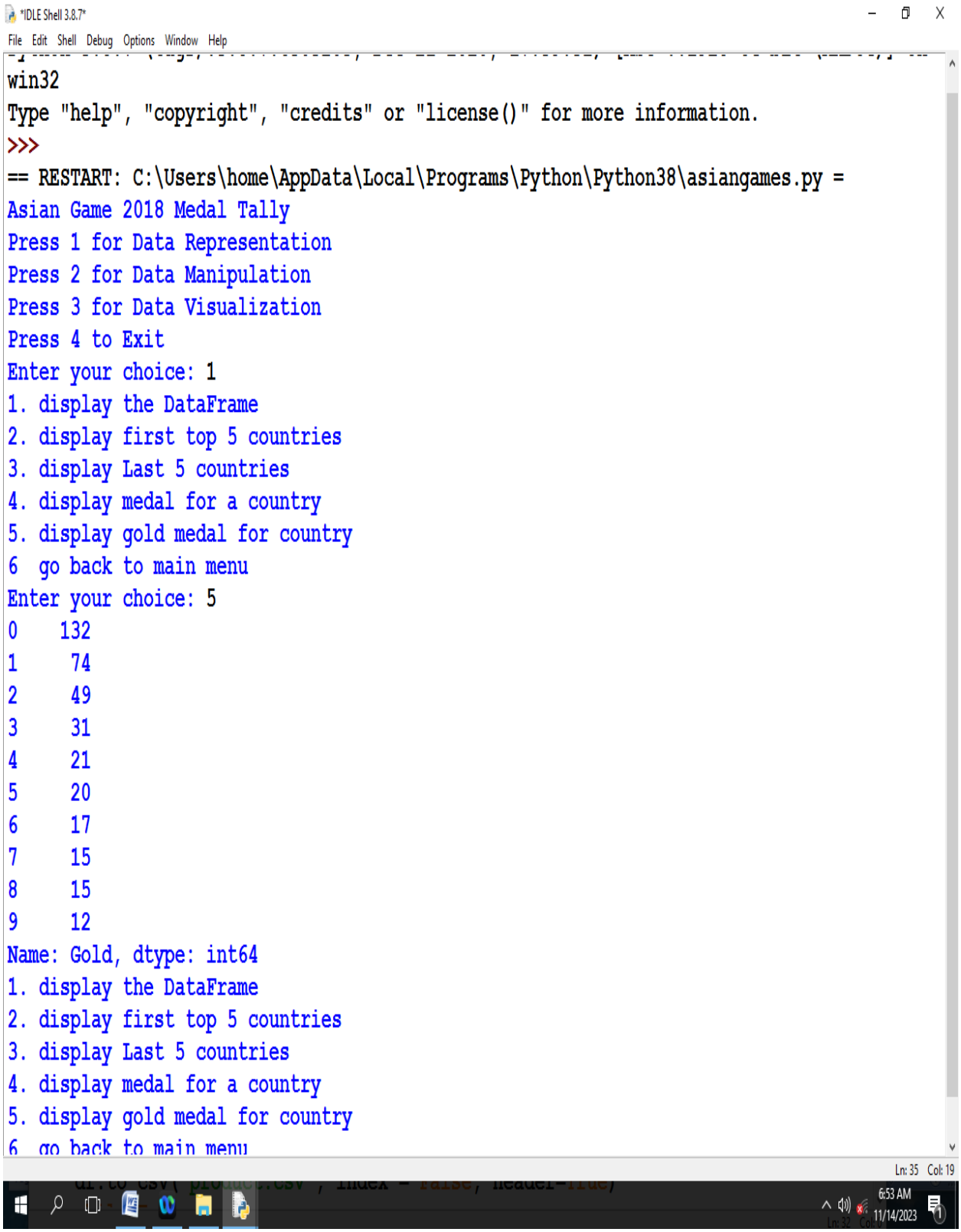
```
            print(df["Gold"])
        elif ch1==6:
            main()
        else:
            print("invalid input")
            break


def man():
    df= pd.read_csv("medal4.csv")
    df.to_csv("product.csv", index = False, header=True)
    while True:
        print("Press 1 to Add a Record to the DataFrame: ")
        print("Press 2 to Delete a record to the DataFrame: ")
        print("Press 3 to go back to the Main Menu: ")
        ch3=int(input("Enter your choice: "))
        if ch3==1:
            c_rank=int(input("Enter the Rank of country: "))
            c_name=input("Enter the country  Name: ")
            gm=int(input("Enter Gold medal won by country: "))
            sm=int(input("Enter Silver medal won by country: "))
            bm=int(input("Enter Bronze medal won by country: "))
            tm=gm+sm+bm
            df=df.append({"Rank":c_rank,"Country":c_name,"Gold":gm,"Silver":sm,
                    "Bronze":bm,"Total":tm},ignore_index=True)
            print(df)
        if ch3==2:
            n=int(input("Enter index number/row number for deletion: "))
            df.drop(n,inplace=True)
```

```
        print(df)
    if ch3==3:
        main()
def visual():
    df=pd.read_csv("medal4.csv")
    print("Visulation of data")
    print("====================")
    print(" Multiple line  Chart ")
    print("====================")

    x=df["Rank"]
    print(x)
    y=df["Gold"]
    y1=df["Silver"]
    y2=df["Bronze"]
    plt.bar(x,y,color="r",width=.25,label="Gold")
    plt.bar(x+.25,y1,color="g",width=.25,label="Silver")
    plt.bar(x+.5,y2,color="b",width=.25,label="Bronze")
    plt.xlabel("Country Rank")
    plt.ylabel("Gold/Silver/Bronze")
    plt.title("Asian Games Medal Tally")
    plt.legend()
    plt.show()

def main():
    while True:
        print("Asian Game 2018 Medal Tally")
        print("Press 1 for Data Representation")
```

```
 print("Press 2 for Data Manipulation")
 print("Press 3 for Data Visualization")
 print("Press 4 to Exit")
 ch=int(input("Enter your choice: "))
 if ch==1:
    vis()
 elif ch==2:
    man()
 elif ch==3:
    visual()
 elif ch==4:
    print("Stopping Program")
    break
    else:
    print('Invalid Input - Enter choice Between  1 to 4')
main()
```

OUTPUT


IDLE Shell 3.8.7
File Edit Shell Debug Options Window Help
Python 3.8.7 (tags/v3.8.7:6503f05, Dec 21 2020, 17:59:51) [MSC v.1928 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
== RESTART: C:\Users\home\AppData\Local\Programs\Python\Python38\asiangames.py =
Asian Game 2018 Medal Tally
Press 1 for Data Representation
Press 2 for Data Manipulation
Press 3 for Data Visualization
Press 4 to Exit
Enter your choice: 1
1. display the DataFrame
2. display first top 5 countries
3. display Last 5 countries
4. display medal for a country
5. display gold medal for country
6 go back to main menu
Enter your choice: 2
Rank Country Gold Silver Bronze Total
0 1 China 132 92 65 289
1 2 Japan 74 56 74 204
2 3 South Korea 49 57 70 176
3 4 Indonesia 31 24 43 98
4 5 Uzbekistan 21 24 25 70
1. display the DataFrame
2. display first top 5 countries
3. display Last 5 countries
4. display medal for a country
5. display gold medal for country
6 go back to main menu
Enter your choice:
Ln: 30 Col: 19
6:52 AM
11/14/2023


IDLE Shell 3.8.7
File Edit Shell Debug Options Window Help
win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
== RESTART: C:\Users\home\AppData\Local\Programs\Python\Python38\asiangames.py =
Asian Game 2018 Medal Tally
Press 1 for Data Representation
Press 2 for Data Manipulation
Press 3 for Data Visualization
Press 4 to Exit
Enter your choice: 1
1. display the DataFrame
2. display first top 5 countries
3. display Last 5 countries
4. display medal for a country
5. display gold medal for country
6 go back to main menu
Enter your choice: 5
0 132
1 74
2 49
3 31
4 21
5 20
6 17
7 15
8 15
9 12
Name: Gold, dtype: int64
1. display the DataFrame
2. display first top 5 countries
3. display Last 5 countries
4. display medal for a country
5. display gold medal for country
6 go back to main menu
Ln: 35 Col: 19
6:53 AM
11/14/2023

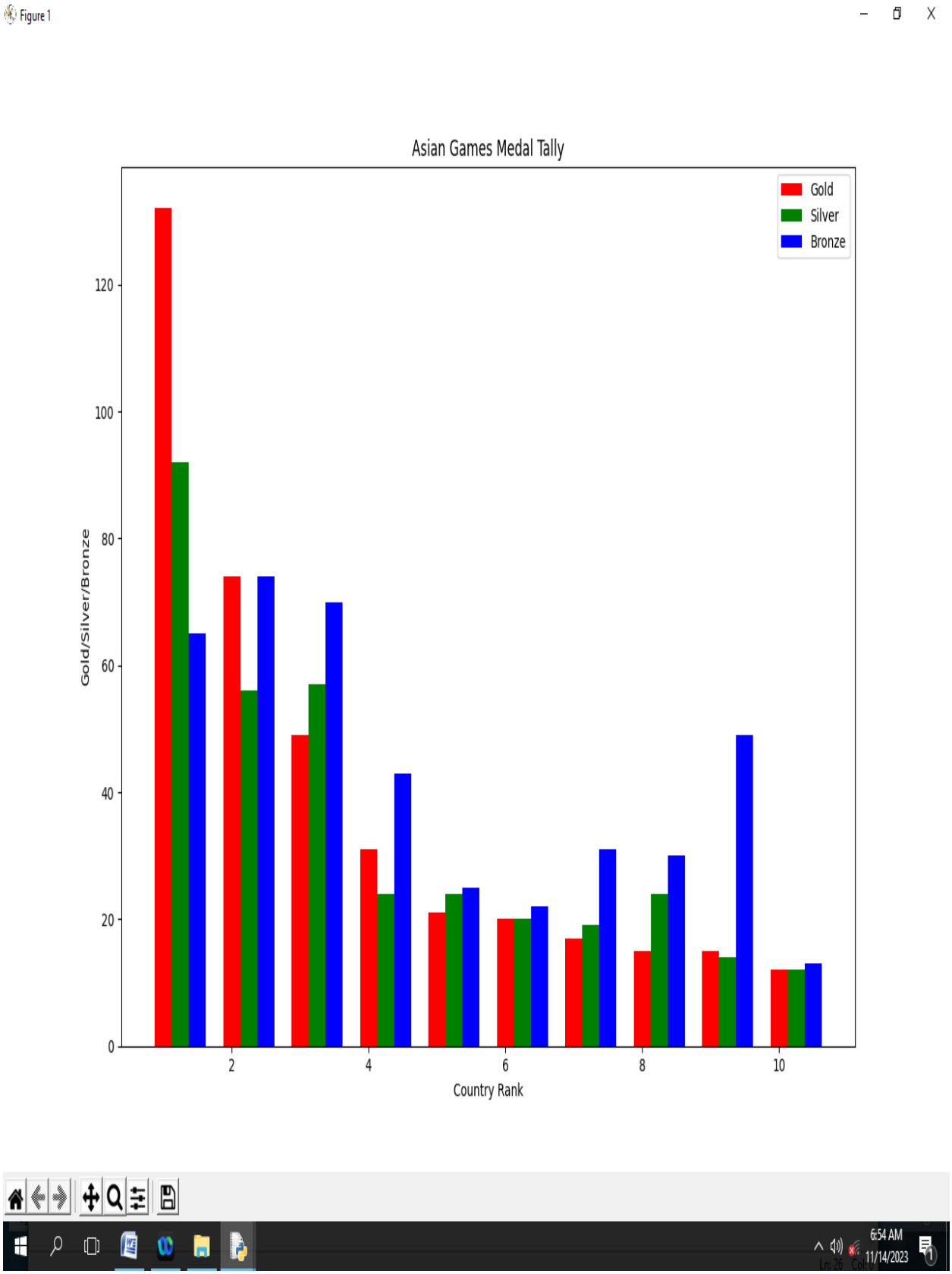


Figure 1
Asian Games Medal Tally
Gold
Silver
Bronze
Gold/Silver/Bronze
Country Rank
0
20
40
60
80
100
120
2
4
6
8
10
6:54 AM
11/14/2023

Medal4.csv

Rank,Country,Gold,Silver,Bronze,Total

1,China,132,92,65,289

2,Japan,74,56,74,204

3,South Korea,49,57,70,176

4,Indonesia,31,24,43,98

5,Uzbekistan,21,24,25,70

6,Iran,20,20,22,62

7,Chnese Taipie,17,19,31,67

8,India,15,24,30,69

9,Kazakhastan,15,14,49,73

10,Dpr Korea,12,12,13,37