IP PROJECT-SYNOPSIS

FIFA WORLDCUPS

A

DISSERTATION SUBMITTED

AS PARTIAL FULFILLMENT OF THE REQUIREMENT OF THE SUBJECT

INFORMATICS PRACTICES

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CERTIFICATE

This is to certify that_____a student of Class –XII (Science) bearing the roll number _____of Delhi Public School Guwahati has participated and successfully completed the Project on_____in Informatics Practices and submitted in due time under my supervision and guidance.

_____

Principal

_____ _____

Teacher in Charge **Examiner's Signature**

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INTRODUCTION

Introduction to Python

Python is a popular programming language. It was created by Guido van Rossum, and released in 1991. It is used for web development (serverside), software development, mathematics, system scripting. It's simple, easy to learn syntax emphasizes readability and therefore reduces the cost of program maintenance. Python supports modules and packages, which encourages program modularity and code reuse.

It is an interpreted language, which means that the written code is not actually translated to a computer-readable format at runtime whereas most programming languages do this conversion before the program is even run. This type of language is also referred to as a "scripting language" because it was initially meant to be used for trivial projects.

A large majority of web applications and platforms rely on Python, including Google's search engine, YouTube, and the web-oriented transaction system of the New York Stock Exchange (NYSE).

Introduction to Jupyter Notebook

The Jupyter Notebook is an open source web application that you can use to create and share documents that contain live code, equations, visualizations, and text. Jupyter Notebook is maintained by the people at Project Jupyter.

Jupyter Notebooks are a spin-off project from the IPython project, which used to have an IPython Notebook project itself. The name, Jupyter, comes from the core supported programming languages that it supports: Julia, Python, and R. Jupyter ships with the IPython kernel, which allows you to write your programs in Python, but there are currently over 100 other kernels that you can also use.

Introduction to libraries

In programming, a library is a collection of precompiled routines that a program can use. The routines, sometimes called modules, are stored in object format. Libraries are particularly useful for storing frequently used routines because you do not need to explicitly link them to every program that uses them. The linker automatically looks in libraries for routines that it does not find elsewhere.

Pandas

The Pandas is a high-performance open-source library for data analysis in Python, developed by Wes McKinney in 2008. Over the years, it has become the de-facto standard library for data analysis using Python. It can handle a myriad of operations on data-sets: sub-setting, slicing, filtering, merging, grouping, reordering, and re-shaping. Python with Pandas is used in a wide range of fields including academic and commercial domains including finance, economics, Statistics, analytics, etc.

Matplotlib

Matplotlib is a visualization library in Python that is used for 2D plots of arrays. It was introduced by John Hunter in 2002. It is a multi-platform data visualization library which produces publication quality figures in a variety of hardcopy formats and interactive environments across platforms. Matplotlib can be used in Python scripts, the Python and IPython shell, web application servers and various graphical user interface toolkits.

Matplotlib is mostly written in python, a few segments are written in C, Objective-C and JavaScript for Platform compatibility.

NumPy

NumPy is a package that defines a multi-dimensional array object and associated fast math functions that operate on it. It was created in 2005 by Travis Oliphant. The core functionality of NumPy is its "ndarray", for n-dimensional array, data structure. These arrays are strided views on memory. In contrast to Python's built-in list data structure, these arrays are homogeneously typed: all elements of a single array must be of the same type. Using NumPy in Python gives functionality comparable to MATLAB since they are both interpreted, and they both allow the user to write fast programs as long as most operations work on arrays or matrices instead of scalars.

TOOLS/ENVIRONMENT USED

Hardware Specifications

Windows Edition

Windows 10 Home Single Language

System

Processor: Intel® Core™ i3-8130U
CPU @ 2.20 GHz
Installed Memory Ram: 4.00GB
System Type: 64-bit Operating System, x64-based Processor

Software Specifications

Jupyter Notebook (Anaconda)
Pandas Library

DESCRIPTION

1. Dataset Used

https://www.kaggle.com/abecklas/fifa-world-cup

2. Working of the program

The program consists of one main-menu and six sub-menus. Each submenu is again divided into several options which give us the desired output.

In the main menu there are 6 sub-menus-

1. **DATA COLLECTION**
2. **MANIPULATION**
3. **ANALYSIS**
4. **VISULAISATION**
5. **DATA EXPORT TO CSV**
6. **EXIT**

In the '*DATA COLLECTION*' menu, the user is asked to choose between importing from a csv file from sql or dataframe and after the command runs,user is then asked whether to view the converted data or return to the main menu.

In the '*MANIPULATION*' menu, the data in the csv file can be manipulated like-

1. **Inserting a new row**
2. **Deleting an existing row**
3. **Updating the data**
4. **Sorting the data.**

In the '*ANALYSIS*' menu, data can be viewed with certain given conditions-

1. **Display top records**
   (The user is asked to specify the number of rows from the top to be displayed)
2. **Display bottom records**
   (The user is asked to specify the number of rows from the bottom to be displayed)
3. **Display a particular row**
4. **Display a row on the basis of conditions**

In the '*DATA VISUALISATION*' menu all the information about graphs is given. In the menu Line Graph, Bar Graph, Histogram is included each with options to choose from like-

1. **LINE GRAPH**
    a. **Year VS Total Goals Scored**
    b. **Number of Spectators VS Year**
    c. **Number of Teams Qualified VS Year**
2. **BAR GRAPH**
    a. **Year VS Total Goals Scored**
    b. **Number of Spectators VS Year**
    c. **Number of Teams Qualified VS Year**
    d. **Double Bar Graph-Goals Scored VS Year, Matches Played VS Year**
3. **HISTOGRAM**
    a. **Winner Countries of FIFA WORLD CUP**
    b. **Number of Goals Scored**
    c. **Number of Teams Qualified**

In the ‘ *DATA EXPORT TO CSV MENU* ‘ menu the data is converted back from dataframe and sql to csv.

In the ‘*EXIT* ’ menu the user is asked whether to end the

In [ ]:

MAIN MENU

```
                # Informatics-Practices Project

BY:
DRON BERIA  (XII,B)
ARRAI SWRANG BRAHMA  (XII,B)

=======================================================
                     FIFA WORLD CUP
=======================================================

~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
|(1)                 Data Collection                  |
|                    ◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆                 |
|                                                     |
| Data import from CSV to SQL                         |
| Data import from CSV to DataFrame                   |
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
|(2)                Data Manipulation on SQL          |
|                   ◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆          |
|                                                     |
| Insert rows                                         |
| Delete rows                                         |
| Update information                                  |
| Sort data                                           |
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
|(3)                 Data Analysis                    |
|                    ◆◆◆◆◆◆◆◆◆◆◆◆◆◆                   |
|                                                     |
| Display top records                                 |
| Display bottom records                              |
| Display a particular Row                            |
| Display a Row on basis of conditions                |
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
```

```
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
|(4)                Data Visualization                |
|                   ◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆                |
|                                                     |
| Line Graph                                          |
| Bar Graph                                           |
| Histogram Graph                                     |
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
|(5)                Data Export to CSV                |
|                   ◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆◆                |
|                                                     |
| Transfer the changes back to csv                    |
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
|(6)                        EXIT                      |
|                           ◆◆◆◆                      |
|                                                     |
| EXIT                                                |
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

Enter your choice [1-6]:
```

OPTION [1] FROM THE MAIN MENU

```
Enter your choice[1-6]: 1
-----------------------------------DATA COLLECTION---------------------------------
                              ♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦
-----------------------------------------------------------------------------------------------------
1. Data import from CSV to SQL
2. Data import from csv to dataframe
3. Back to the main menu?
```

OPTION [1] FROM DATA COLLECTION

```
-----------------------------------------------------------------------------------------------------
SELECT FROM DATA COLLECTION:['1 or 3'] - 1
-----------------------------------DATA IMPORT FROM CSV TO SQL---------------
                            ♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦
Database is created
You're connected to database: WORLDCUPS  None
Creating table....
Table is created....
Do you want to view the table? [Y/N]: y
    Year       Country      Winner       RunnersUP        Third
0   1930       Uruguay     Uruguay       Argentina          USA
1   1934         Italy       Italy  Czechoslovakia      Germany
2   1938        France       Italy         Hungary       Brazil
3   1950        Brazil     Uruguay          Brazil       Sweden
4   1954   Switzerland  Germany FR         Hungary      Austria
5   1958        Sweden      Brazil          Sweden       France
6   1962         Chile      Brazil  Czechoslovakia        Chile
7   1966       England     England      Germany FR     Portugal
8   1970        Mexico      Brazil           Italy   Germany FR
9   1974       Germany  Germany FR     Netherlands       Poland
10  1978     Argentina   Argentina     Netherlands       Brazil
11  1982         Spain       Italy      Germany FR       Poland
12  1986        Mexico   Argentina      Germany FR       France
13  1990         Italy  Germany FR       Argentina        Italy
14  1994           USA      Brazil           Italy       Sweden
15  1998        France      France          Brazil      Croatia
16  2002   Korea/Japan      Brazil         Germany       Turkey
17  2006       Germany       Italy          France      Germany
18  2010  South Africa       Spain     Netherlands      Germany
19  2014        Brazil     Germany       Argentina  Netherlands
```

```
            Fourth  GoalsScored  QualifiedTeams  MatchesPlayed Attendence
0       Yugoslavia           70              13             18    590.549
1          Austria           70              16             17        363
2           Sweden           84              15             18      375.7
3            Spain           88              13             22  1.045.246
4          Uruguay          140              16             26    768.607
5       Germany FR          126              16             35     819.81
6       Yugoslavia           89              16             32    893.172
7     Soviet Union           89              16             32  1.563.135
8          Uruguay           95              16             32  1.603.975
9           Brazil           97              16             38  1.865.753
10           Italy          102              16             38  1.545.791
11          France          146              24             52  2.109.723
12         Belgium          132              24             52  2.394.031
13         England          115              24             52  2.516.215
14        Bulgaria          141              24             52  3.587.538
15     Netherlands          171              32             64  2.785.100
16  Korea Republic          161              32             64  2.705.197
17        Portugal          147              32             64  3.359.439
18         Uruguay          145              32             64  3.178.856
19          Brazil          171              32             64  3.386.810
-----------------------------------DATA COLLECTION----------------------------------
                          ♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦
-------------------------------------------------------------------------------------
1. Data import from CSV to SQL
2. Data import from csv to dataframe
3. Back to the main menu?
```

 # OPTION [2] FROM DATA COLLECTION

```
-------------------------------------------------------------------------------------------------
SELECT FROM DATA COLLECTION:{'1 or 3'} - 2
------------------DATA IMPORT FROM CSV TO DATAFRAME---------
                  ♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦
DATA IMPORTED SUCCESSFULLY
Do you want to view the table? [Y/N]: y
    Year       Country      Winner      Runners-Up        Third
0   1930       Uruguay     Uruguay       Argentina          USA
1   1934         Italy       Italy  Czechoslovakia      Germany
2   1938        France       Italy         Hungary       Brazil
3   1950        Brazil     Uruguay          Brazil       Sweden
4   1954   Switzerland  Germany FR         Hungary      Austria
5   1958        Sweden      Brazil          Sweden       France
```

6	1962	Chile	Brazil	Czechoslovakia	Chile
7	1966	England	England	Germany FR	Portugal
8	1970	Mexico	Brazil	Italy	Germany FR
9	1974	Germany	Germany FR	Netherlands	Poland
10	1978	Argentina	Argentina	Netherlands	Brazil
11	1982	Spain	Italy	Germany FR	Poland
12	1986	Mexico	Argentina	Germany FR	France
13	1990	Italy	Germany FR	Argentina	Italy
14	1994	USA	Brazil	Italy	Sweden
15	1998	France	France	Brazil	Croatia
16	2002	Korea/Japan	Brazil	Germany	Turkey
17	2006	Germany	Italy	France	Germany
18	2010	South Africa	Spain	Netherlands	Germany
19	2014	Brazil	Germany	Argentina	Netherlands

	Fourth	GoalsScored	QualifiedTeams	MatchesPlayed	Attendance
0	Yugoslavia	70	13	18	590.549
1	Austria	70	16	17	363
2	Sweden	84	15	18	375.7
3	Spain	88	13	22	1.045.246
4	Uruguay	140	16	26	768.607
5	Germany FR	126	16	35	819.81
6	Yugoslavia	89	16	32	893.172
7	Soviet Union	89	16	32	1.563.135
8	Uruguay	95	16	32	1.603.975
9	Brazil	97	16	38	1.865.753
10	Italy	102	16	38	1.545.791
11	France	146	24	52	2.109.723
12	Belgium	132	24	52	2.394.031
13	England	115	24	52	2.516.215
14	Bulgaria	141	24	52	3.587.538
15	Netherlands	171	32	64	2.785.100
16	Korea Republic	161	32	64	2.705.197
17	Portugal	147	32	64	3.359.439
18	Uruguay	145	32	64	3.178.856
19	Brazil	171	32	64	3.386.810

OPTION [2] FROM THE MAIN MENU

```
Enter your choice[1-6]: 2
-----------------------------------DATA MANIPULATION-------------------------------
                            ♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦
-----------------------------------------------------------------------------------
|1.Insert rows                                                                    |
|2.Delete rows                                                                    |
|3.Update information                                                             |
|4.Sort information                                                               |
|5.Go back                                                                        |
-----------------------------------------------------------------------------------
```

OPTION [1] FROM DATA MANIPULATION

```
SELECT FROM DATA MANIPULATION:1
---------------------------------INSERT ROWS---------------------------------
                          ♦♦♦♦♦♦♦♦♦♦♦
Enter year: 2022
Enter your country: India
Enter your winner: India
Enter runners Up: Japan
Enter Third: UAE
Enter Fourth: Russia
Enter Goals Secured: 30
Enter Qualified Teams: 30
Enter Matches Played: 30
Enter Attendance: 737290
New row inserted successfully
Do you want to view the table? [Y/N]: y
    Year       Country      Winner       RunnersUP        Third
0   1930       Uruguay     Uruguay       Argentina          USA
1   1934         Italy       Italy  Czechoslovakia      Germany
2   1938        France       Italy         Hungary       Brazil
3   1950        Brazil     Uruguay          Brazil       Sweden
4   1954   Switzerland  Germany FR         Hungary      Austria
5   1958        Sweden      Brazil          Sweden       France
6   1962         Chile      Brazil  Czechoslovakia        Chile
7   1966       England     England      Germany FR     Portugal
8   1970        Mexico      Brazil           Italy   Germany FR
9   1974       Germany  Germany FR     Netherlands       Poland
10  1978     Argentina   Argentina     Netherlands       Brazil
```

11	1982	Spain	Italy	Germany FR	Poland
12	1986	Mexico	Argentina	Germany FR	France
13	1990	Italy	Germany FR	Argentina	Italy
14	1994	USA	Brazil	Italy	Sweden
15	1998	France	France	Brazil	Croatia
16	2002	Korea/Japan	Brazil	Germany	Turkey
17	2006	Germany	Italy	France	Germany
18	2010	South Africa	Spain	Netherlands	Germany
19	2014	Brazil	Germany	Argentina	Netherlands
20	2022	India	India	Japan	UAE

	Fourth	GoalsScored	QualifiedTeams	MatchesPlayed	Attendence
0	Yugoslavia	70	13	18	590.549
1	Austria	70	16	17	363
2	Sweden	84	15	18	375.7
3	Spain	88	13	22	1.045.246
4	Uruguay	140	16	26	768.607
5	Germany FR	126	16	35	819.81
6	Yugoslavia	89	16	32	893.172
7	Soviet Union	89	16	32	1.563.135
8	Uruguay	95	16	32	1.603.975
9	Brazil	97	16	38	1.865.753
10	Italy	102	16	38	1.545.791
11	France	146	24	52	2.109.723
12	Belgium	132	24	52	2.394.031
13	England	115	24	52	2.516.215
14	Bulgaria	141	24	52	3.587.538
15	Netherlands	171	32	64	2.785.100
16	Korea Republic	161	32	64	2.705.197
17	Portugal	147	32	64	3.359.439
18	Uruguay	145	32	64	3.178.856
19	Brazil	171	32	64	3.386.810
20	Russia	30	30	30	737290.0

----------DATA MANIPULATION----------

♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦

|1.Insert rows |
|2.Delete rows |
|3.Update information |
|4.Sort information |
|5.Go back |

 # OPTION [2] FROM DATA MANIPULATION

```
SELECT FROM DATA MANIPULATION:2
----------------------------------DELETE ROWS-----------------------------------
                          ♦♦♦♦♦♦♦♦♦♦
Enter the Year of the row you want to delete:2022

Row deleted successfully!
Do you want to view the table? [Y/N]: y
```

	Year	Country	Winner	RunnersUP	Third
0	1930	Uruguay	Uruguay	Argentina	USA
1	1934	Italy	Italy	Czechoslovakia	Germany
2	1938	France	Italy	Hungary	Brazil
3	1950	Brazil	Uruguay	Brazil	Sweden
4	1954	Switzerland	Germany FR	Hungary	Austria
5	1958	Sweden	Brazil	Sweden	France
6	1962	Chile	Brazil	Czechoslovakia	Chile
7	1966	England	England	Germany FR	Portugal
8	1970	Mexico	Brazil	Italy	Germany FR
9	1974	Germany	Germany FR	Netherlands	Poland
10	1978	Argentina	Argentina	Netherlands	Brazil
11	1982	Spain	Italy	Germany FR	Poland
12	1986	Mexico	Argentina	Germany FR	France
13	1990	Italy	Germany FR	Argentina	Italy
14	1994	USA	Brazil	Italy	Sweden
15	1998	France	France	Brazil	Croatia
16	2002	Korea/Japan	Brazil	Germany	Turkey
17	2006	Germany	Italy	France	Germany
18	2010	South Africa	Spain	Netherlands	Germany
19	2014	Brazil	Germany	Argentina	Netherlands

	Fourth	GoalsScored	QualifiedTeams	MatchesPlayed	Attendence
0	Yugoslavia	70	13	18	590.549
1	Austria	70	16	17	363
2	Sweden	84	15	18	375.7
3	Spain	88	13	22	1.045.246
4	Uruguay	140	16	26	768.607
5	Germany FR	126	16	35	819.81
6	Yugoslavia	89	16	32	893.172
7	Soviet Union	89	16	32	1.563.135
8	Uruguay	95	16	32	1.603.975
9	Brazil	97	16	38	1.865.753
10	Italy	102	16	38	1.545.791
11	France	146	24	52	2.109.723
12	Belgium	132	24	52	2.394.031

```
13         England          115              24              52  2.516.215
14        Bulgaria          141              24              52  3.587.538
15     Netherlands          171              32              64  2.785.100
16  Korea Republic          161              32              64  2.705.197
17        Portugal          147              32              64  3.359.439
18         Uruguay          145              32              64  3.178.856
19          Brazil          171              32              64  3.386.810
```

 # OPTION [3] FROM DATA MANIPULATION

```
-----------------------------------DATA MANIPULATION-------------------------------
                          ♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦
-----------------------------------------------------------------------------------
|1.Insert rows                                                                    |
|2.Delete rows                                                                    |
|3.Update information                                                             |
|4.Sort information                                                               |
|5.Go back                                                                        |
-----------------------------------------------------------------------------------
SELECT FROM DATA MANIPULATION:3
-----------------------------------UPDATE INFORMATION-------------------------------
                        ♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦
Enter the year which you want to update:
2014
Enter the field you want to update:
1. year
2. country
3. Winner
4. RunnersUP
5. third
6. fourth
7. Goals Scored
8. Qualified Teams
9. Matches Played
10. Attendance
2
Enter the new data: Japan

Your data has been Updated!

Do you want to view the table? [Y/N]: y
    Year       Country      Winner       RunnersUP        Third
0   1930       Uruguay     Uruguay       Argentina          USA
1   1934         Italy       Italy  Czechoslovakia      Germany
2   1938        France       Italy         Hungary       Brazil
3   1950        Brazil     Uruguay          Brazil       Sweden
4   1954   Switzerland  Germany FR         Hungary      Austria
```

5	1958	Sweden	Brazil	Sweden	France
6	1962	Chile	Brazil	Czechoslovakia	Chile
7	1966	England	England	Germany FR	Portugal
8	1970	Mexico	Brazil	Italy	Germany FR
9	1974	Germany	Germany FR	Netherlands	Poland
10	1978	Argentina	Argentina	Netherlands	Brazil
11	1982	Spain	Italy	Germany FR	Poland
12	1986	Mexico	Argentina	Germany FR	France
13	1990	Italy	Germany FR	Argentina	Italy
14	1994	USA	Brazil	Italy	Sweden
15	1998	France	France	Brazil	Croatia
16	2002	Korea/Japan	Brazil	Germany	Turkey
17	2006	Germany	Italy	France	Germany
18	2010	South Africa	Spain	Netherlands	Germany
19	2014	**JAPAN**	Germany	Argentina	Netherlands

	Fourth	GoalsScored	QualifiedTeams	MatchesPlayed	Attendence
0	Yugoslavia	70	13	18	590.549
1	Austria	70	16	17	363
2	Sweden	84	15	18	375.7
3	Spain	88	13	22	1.045.246
4	Uruguay	140	16	26	768.607
5	Germany FR	126	16	35	819.81
6	Yugoslavia	89	16	32	893.172
7	Soviet Union	89	16	32	1.563.135
8	Uruguay	95	16	32	1.603.975
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16	Korea Republic	161	32	64	2.705.197
17	Portugal	147	32	64	3.359.439
18	Uruguay	145	32	64	3.178.856
19	Brazil	171	32	64	3.386.810

 # OPTION [4] FROM DATA MANIPULATION

```
----------------------------------DATA MANIPULATION--------------------------------
                              ♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦
-----------------------------------------------------------------------------------
|1.Insert rows                                                                    |
|2.Delete rows                                                                    |
|3.Update information                                                             |
|4.Sort information                                                               |
|5.Go back                                                                        |
-----------------------------------------------------------------------------------
SELECT FROM DATA MANIPULATION:4
----------------------------------SORT DATA-----------------------------------
                          ♦♦♦♦♦♦♦♦♦♦
Enter 1 to sort data in Ascending order
Enter 2 to sort data in Descending order
Enter choice: 1
Enter the field you want to update:
[Year,country, Winner, RunnersUP,Third,Fourth,GoalsScored ,QualifiedTeams
,MatchesPlayed , Attendance]
year

Do you want to view the table? [Y/N]: y
    Year       Country      Winner       RunnersUP        Third
0   1930       Uruguay     Uruguay       Argentina          USA
1   1934         Italy       Italy  Czechoslovakia      Germany
2   1938        France       Italy         Hungary       Brazil
3   1950        Brazil     Uruguay          Brazil       Sweden
4   1954   Switzerland  Germany FR         Hungary      Austria
5   1958        Sweden      Brazil          Sweden       France
6   1962         Chile      Brazil  Czechoslovakia        Chile
7   1966       England     England      Germany FR     Portugal
8   1970        Mexico      Brazil           Italy   Germany FR
9   1974       Germany  Germany FR     Netherlands       Poland
10  1978     Argentina   Argentina     Netherlands       Brazil
11  1982         Spain       Italy      Germany FR       Poland
12  1986        Mexico   Argentina      Germany FR       France
13  1990         Italy  Germany FR       Argentina        Italy
14  1994           USA      Brazil           Italy       Sweden
15  1998        France      France          Brazil      Croatia
16  2002   Korea/Japan      Brazil         Germany       Turkey
17  2006       Germany       Italy          France      Germany
18  2010  South Africa       Spain     Netherlands      Germany
19  2014        Brazil     Germany       Argentina  Netherlands
```

```
            Fourth  GoalsScored  QualifiedTeams  MatchesPlayed Attendence
0       Yugoslavia           70              13             18    590.549
1          Austria           70              16             17        363
2           Sweden           84              15             18      375.7
3            Spain           88              13             22  1.045.246
4          Uruguay          140              16             26    768.607
5       Germany FR          126              16             35     819.81
6       Yugoslavia           89              16             32    893.172
7     Soviet Union           89              16             32  1.563.135
8          Uruguay           95              16             32  1.603.975
9           Brazil           97              16             38  1.865.753
10           Italy          102              16             38  1.545.791
11          France          146              24             52  2.109.723
12         Belgium          132              24             52  2.394.031
13         England          115              24             52  2.516.215
14        Bulgaria          141              24             52  3.587.538
15     Netherlands          171              32             64  2.785.100
16  Korea Republic          161              32             64  2.705.197
17        Portugal          147              32             64  3.359.439
18         Uruguay          145              32             64  3.178.856
19          Brazil          171              32             64  3.386.810

----------------------------------------DATA MANIPULATION---------------------------------
                              ♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦
-------------------------------------------------------------------------------
|1.Insert rows                                                                |
|2.Delete rows                                                                |
|3.Update information                                                         |
|4.Sort information                                                           |
|5.Go back                                                                    |
-------------------------------------------------------------------------------
SELECT FROM DATA MANIPULATION:4
-----------------------------------SORT DATA-------------------------------------
                         ♦♦♦♦♦♦♦♦♦♦
Enter 1 to sort data in Ascending order
Enter 2 to sort data in Descending order
Enter choice: 2
Enter the field you want to update:
[country, Winner, RunnersUP,Third,Fourth,GoalsScored ,QualifiedTeams
,MatchesPlayed , Attendance]
country
Do you want to view the table? [Y/N]:  y
    Year       Country      Winner       RunnersUP        Third
0   1930       Uruguay     Uruguay       Argentina          USA
1   1934         Italy       Italy  Czechoslovakia      Germany
2   1938        France       Italy         Hungary       Brazil
3   1950        Brazil     Uruguay          Brazil       Sweden
```

4	1954	Switzerland	Germany FR	Hungary	Austria
5	1958	Sweden	Brazil	Sweden	France
6	1962	Chile	Brazil	Czechoslovakia	Chile
7	1966	England	England	Germany FR	Portugal
8	1970	Mexico	Brazil	Italy	Germany FR
9	1974	Germany	Germany FR	Netherlands	Poland
10	1978	Argentina	Argentina	Netherlands	Brazil
11	1982	Spain	Italy	Germany FR	Poland
12	1986	Mexico	Argentina	Germany FR	France
13	1990	Italy	Germany FR	Argentina	Italy
14	1994	USA	Brazil	Italy	Sweden
15	1998	France	France	Brazil	Croatia
16	2002	Korea/Japan	Brazil	Germany	Turkey
17	2006	Germany	Italy	France	Germany
18	2010	South Africa	Spain	Netherlands	Germany
19	2014	Brazil	Germany	Argentina	Netherlands

	Fourth	GoalsScored	QualifiedTeams	MatchesPlayed	Attendence
0	Yugoslavia	70	13	18	590.549
1	Austria	70	16	17	363
2	Sweden	84	15	18	375.7
3	Spain	88	13	22	1.045.246
4	Uruguay	140	16	26	768.607
5	Germany FR	126	16	35	819.81
6	Yugoslavia	89	16	32	893.172
7	Soviet Union	89	16	32	1.563.135
8	Uruguay	95	16	32	1.603.975
9	Brazil	97	16	38	1.865.753
10	Italy	102	16	38	1.545.791
11	France	146	24	52	2.109.723
12	Belgium	132	24	52	2.394.031
13	England	115	24	52	2.516.215
14	Bulgaria	141	24	52	3.587.538
15	Netherlands	171	32	64	2.785.100
16	Korea Republic	161	32	64	2.705.197
17	Portugal	147	32	64	3.359.439
18	Uruguay	145	32	64	3.178.856
19	Brazil	171	32	64	3.386.810

OPTION [3] FROM THE MAIN MENU

```
Enter your choice[1-6]: 3

----------DATA ANALYSIS----------
                ♦♦♦♦♦♦♦♦♦♦♦♦♦♦

_____________________________________________________
|                    1. Display top records          |
|                    2. Display Bottom records       |
|                    3. Display a particular Row     |
|                    4. Display a Row on basis of conditions |
|                    5. Go back                      |
|____________________________________________________|
```

OPTION [1] FROM DATA ANALYSIS

```
Enter your choice[1-5]: 1
Enter the number of top records to be shown  2
   Year  Country   Winner      Runners-Up    Third      Fourth  GoalsScored
0  1930  Uruguay  Uruguay       Argentina      USA  Yugoslavia           70
1  1934    Italy    Italy  Czechoslovakia  Germany     Austria           70

   QualifiedTeams  MatchesPlayed Attendance
0              13             18    590.549
1              16             17        363
```

OPTION [2] FROM DATA ANALYSIS

```
Enter your choice[1-5]: 2
Enter the number of bottom records to be shown  2
    Year       Country   Winner   Runners-Up        Third   Fourth
18  2010  South Africa    Spain  Netherlands      Germany  Uruguay
19  2014        Brazil  Germany    Argentina  Netherlands   Brazil

    GoalsScored QualifiedTeams  MatchesPlayed Attendance
18          145             32             64  3.178.856
19          171             32             64  3.386.810
```

OPTION [3] FROM DATA ANALYSIS

```
Enter your choice[1-5]: 3
Enter the Row Sl_No: 1
Year                    1930
Country              Uruguay
Winner               Uruguay
Runners-Up         Argentina
Third                    USA
Fourth            Yugoslavia
GoalsScored               70
QualifiedTeams            13
MatchesPlayed             18
Attendance           590.549
Name: 0, dtype: object
```

OPTION [4] FROM DATA ANALYSIS

```
Enter your choice[1-5]: 4
```

```
|                                  Conditions                                  |
|______________________________________________________________________________|
|       1.Select rows on basis of Sl.No                                        |
|       2.Select rows on the basis of years                                    |
|       3.Select rows on the basis of Matchesplayed                            |
|       4.Select rows on the basis of QualifiedTeams                           |
|       5.Go back                                                              |
|       6.exit to main menu                                                    |
|______________________________________________________________________________|
```

```
Enter your choice: 1

Enter beginning Sl.No: 12
Enter ending Sl.No: 15
    Year Country      Winner  Runners-Up   Third    Fourth  GoalsScored
11  1982   Spain       Italy  Germany FR  Poland    France          146
12  1986  Mexico   Argentina  Germany FR  France   Belgium          132
13  1990   Italy  Germany FR   Argentina   Italy   England          115
```

```
14  1994     USA      Brazil       Italy  Sweden  Bulgaria          141

    QualifiedTeams  MatchesPlayed Attendance
11              24             52  2.109.723
12              24             52  2.394.031
13              24             52  2.516.215
14              24             52  3.587.538
```

Conditions
1.Select rows on basis of Sl.No
2.Select rows on the basis of years
3.Select rows on the basis of Matchesplayed
4.Select rows on the basis of QualifiedTeams
5.Go back
6.exit to main menu

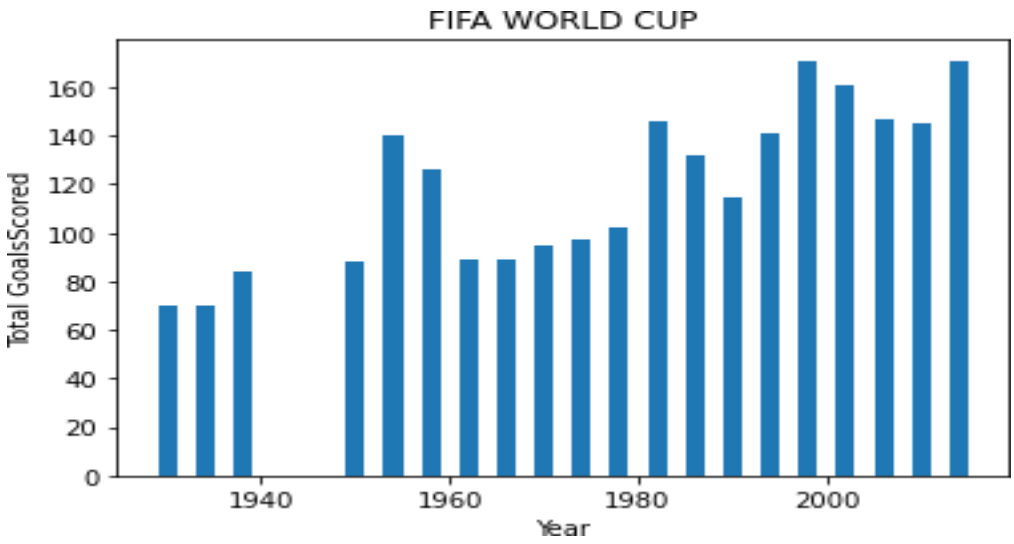
```
Enter your choice: 5
```

OPTION [4] FROM THE MAIN MENU

```
Enter your choice[1-6]: 4
----------------------DATA VISUALISATION----------------------
                        ♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦
|_____________________________________________________________|
|       1.Bar Graph                                           |
|       2.Line Graph                                          |
|       3.Histogram                                           |
|       4.Go Back                                             |
|_____________________________________________________________|
```

OPTION [1] FROM DATA VISUALISATION

```
 SELECT YOUR OPTION FROM VISUALISATION : 1
_____________________________________________________________
1.Year VS Goal Scored
2.Number of Spectators VS Year
3.Qualified Teams VS year
4.Double Bar Graph-Goals Scored VS year,Matches Played VS Year
_____________________________________________________________
Select the Bar GRAPH you want to view[1-4]: 1
```

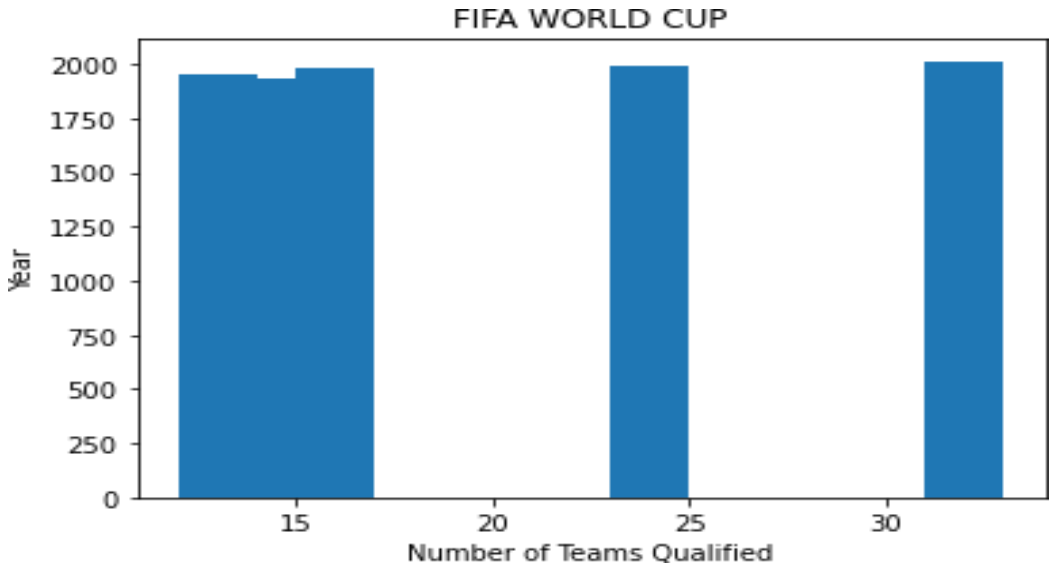



```
SELECT YOUR OPTION FROM VISUALISATION : 1
_____________________________________________________________
1.Year VS Goal Scored
2.Number of Spectators VS Year
```

3.Qualified Teams VS year
4.Double Bar Graph-Goals Scored VS year,Matches Played VS Year

---

Select the Bar GRAPH you want to view[1-4]: 3

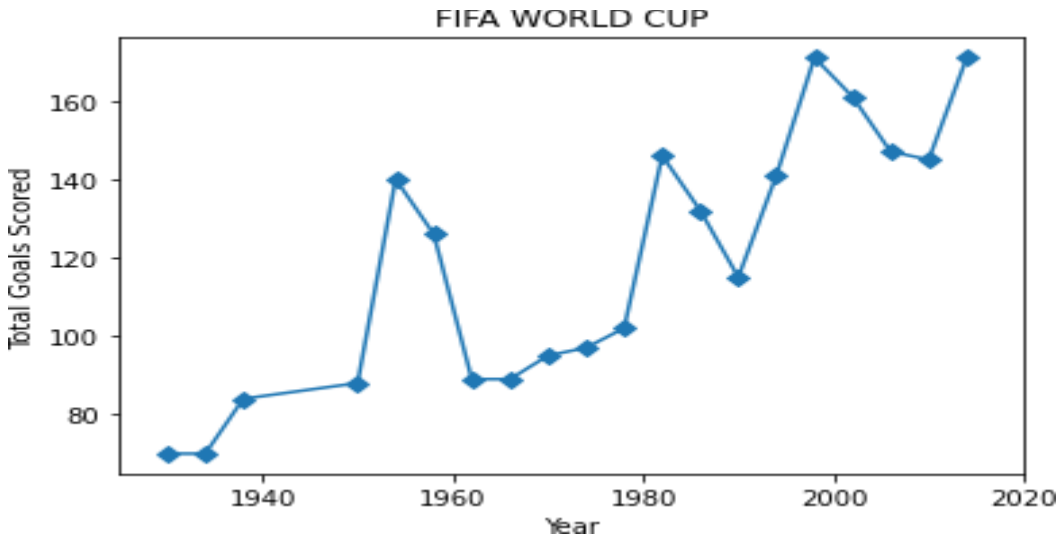


 # OPTION [2] FROM DATA VISUALISATION

SELECT YOUR OPTION FROM VISUALISATION :2

1.Year VS Goal Scored
2.Number of Spectators VS Year
3.Qualified Teams VS year

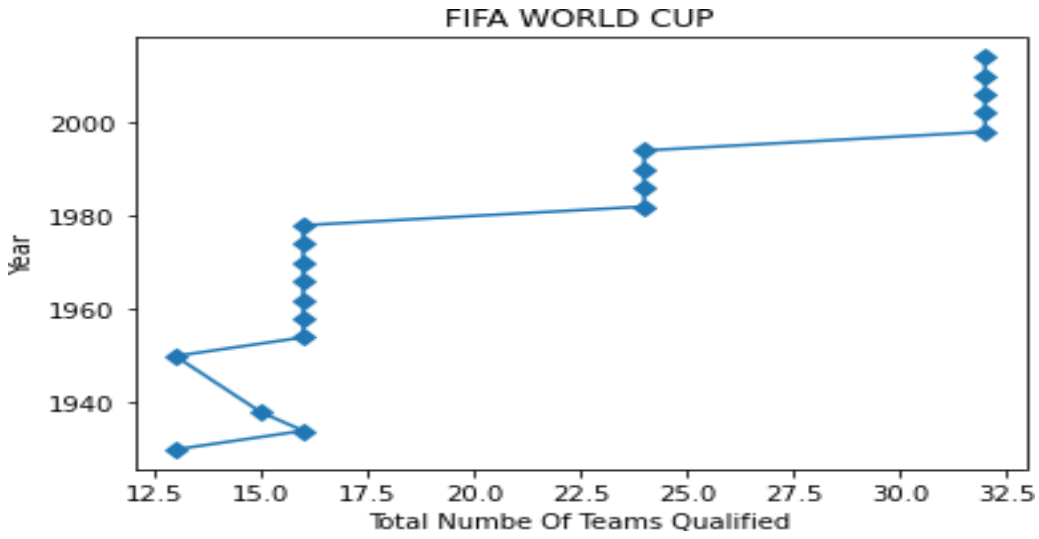
Select the LINE GRAPH you want to view[1-3]:1



SELECT YOUR OPTION FROM VISUALISATION :2

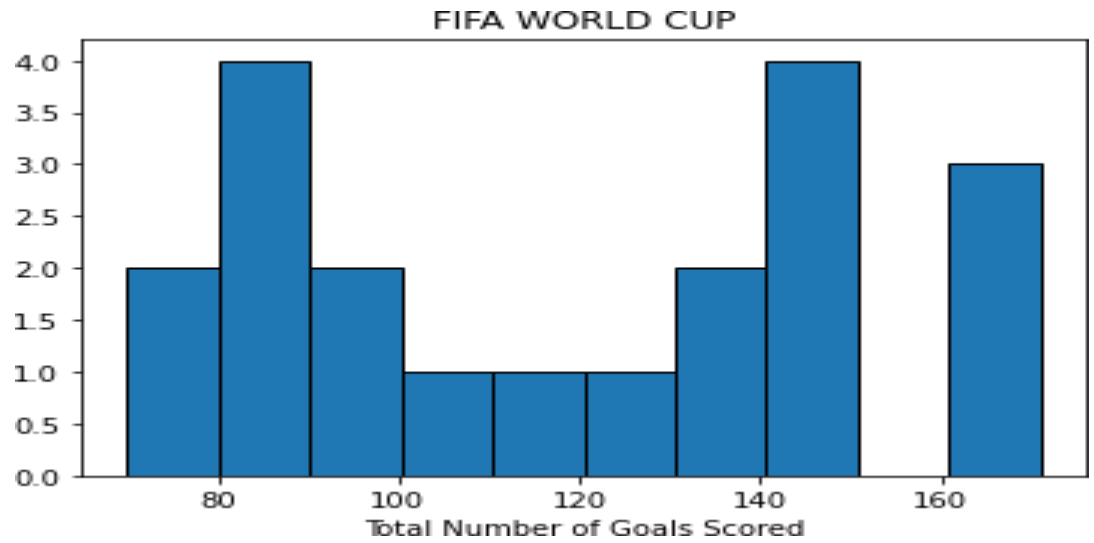
1.Year VS Goal Scored
2.Number of Spectators VS Year
3.Qualified Teams VS year

Select the LINE GRAPH you want to view[1-3]:3

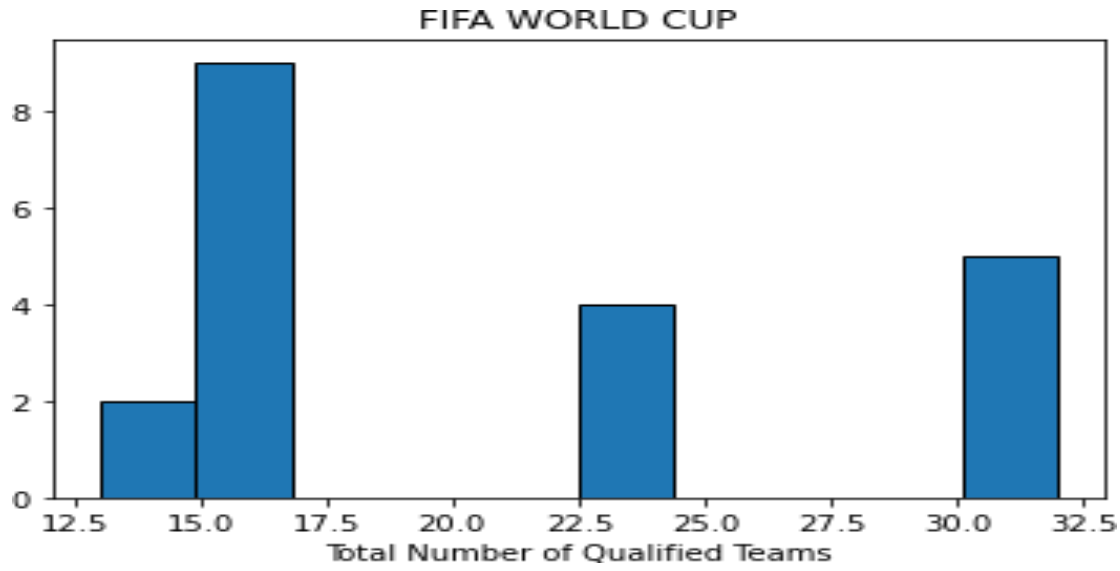


 # OPTION [3] FROM DATA VISUALISATION

```
SELECT YOUR OPTION FROM VISUALISATION :3
_____________________________________________________________________
1.Winner countries of FIFA WORLD CUP
2.Goals Scored
3.Qualified Teams
_____________________________________________________________________
Select the HISTOGRAM you want to view[1-3]:2
```




```
SELECT YOUR OPTION FROM VISUALISATION :3
_____________________________________________________________________
1.Winner countries of FIFA WORLD CUP
2.Goals Scored
3.Qualified Teams
_____________________________________________________________________
Select the HISTOGRAM you want to view[1-3]:3
```


FIFA WORLD CUP
0
2
4
6
8
12.5
15.0
17.5
20.0
22.5
25.0
27.5
30.0
32.5
Total Number of Qualified Teams

 # OPTION [5] FROM MAIN MENU

```
Enter your choice[1-6]: 5
```

Your data has been exported!!

```
Do you want to view the table? [Y/N]: y
```

	Year	Country	Winner	RunnersUP	Third	Fourth	GoalsScored	QualifiedTeams	MatchesPlayed	Attendence
0	1930	Uruguay	Uruguay	Argentina	USA	Yugoslavia	70	13	18	590.549
1	1934	Italy	Italy	Czechoslovakia	Germany	Austria	70	16	17	363
2	1938	France	Italy	Hungary	Brazil	Sweden	84	15	18	375.7
3	1950	Brazil	Uruguay	Brazil	Sweden	Spain	88	13	22	1.045.246
4	1954	Switzerland	Germany FR	Hungary	Austria	Uruguay	140	16	26	768.607
5	1958	Sweden	Brazil	Sweden	France	Germany FR	126	16	35	819.81
6	1962	Chile	Brazil	Czechoslovakia	Chile	Yugoslavia	89	16	32	893.172
7	1966	England	England	Germany FR	Portugal	Soviet Union	89	16	32	1.563.135
8	1970	Mexico	Brazil	Italy	Germany FR	Uruguay	95	16	32	1.603.975
9	1974	Germany	Germany FR	Netherlands	Poland	Brazil	97	16	38	1.865.753
10	1978	Argentina	Argentina	Netherlands	Brazil	Italy	102	16	38	1.545.791
11	1982	Spain	Italy	Germany FR	Poland	France	146	24	52	2.109.723
12	1986	Mexico	Argentina	Germany FR	France	Belgium	132	24	52	2.394.031
13	1990	Italy	Germany FR	Argentina	Italy	England	115	24	52	2.516.215
14	1994	USA	Brazil	Italy	Sweden					
15	1998	France	France	Brazil	Croatia					
16	2002	Korea/Japan	Brazil	Germany	Turkey					
17	2006	Germany	Italy	France	Germany					
18	2010	South Africa	Spain	Netherlands	Germany					
19	2014	Brazil	Germany	Argentina	Netherlands					

14	Bulgaria	141	24	52	3.587.538
15	Netherlands	171	32	64	2.785.100
16	Korea Republic	161	32	64	2.705.197
17	Portugal	147	32	64	3.359.439
18	Uruguay	145	32	64	3.178.856
19	Brazil	171	32	64	3.386.810

 # OPTION [6] FROM MAIN MENU

```
Enter your choice[1-6]: 6
YOU HAVE SUCCESSFULLY VIEWED THE PROJECT
Do you want to restart? [Y/N]: n
```

You have reached the end of this project
Thank You

BIBLIOGRAPHY

1. **https://www.kaggle.com/abecklas/fifa-world-cup**
2. **https://en.wikipedia.org/**
3. **https://www.realpython.com/jupyter-notebook-introduction**
4. **https://www.python.org/**
5. **GOOGLE.COM**

I have also taken help from class notes and my classmates too helped me in completing the project