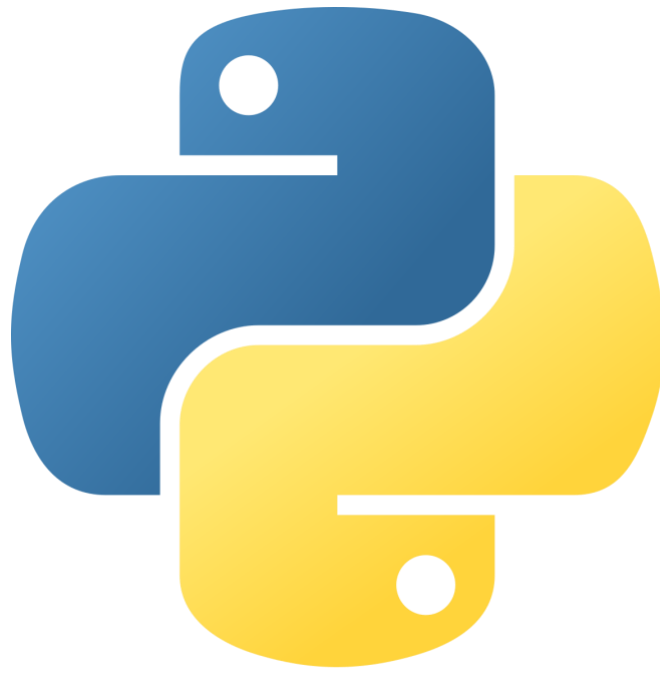


INFORMATION PRACTICES PROJECT



NAME: N. MYTHILI

CLASS: 12A

YEAR: 2022 – 2023

ACKNOWLEDGEMENT

Apart from the efforts of my side, the success of any project depends largely on the encouragement guidelines of my team. I take this opportunity to express my gratitude my team who has been instrumental in the success completion of this project.

I express heartfelt gratitude to our parents for constant encouragement while carrying out this project.

I express my deep sense of gratitude to the luminary The principal Ms. Jyothi Aparna ma'am of Bhavans Sri Ramakrishna Vidyalaya, who has been continuously motivating and extending their helping hand to us.

My sincere thanks to Ms Dipshika Banerjee ma'am , Master Incharge, A guide, Mentor all the above as a friend , who critically reviewed our project and help in solving each and every problem, occurred during the implementation of the project.

The guidance and support received from all the members who contributed towards this project, was vital for the success of the project. I am grateful for their constant support and help.

Why this Project?

Cost is a major concern for anyone who is planning to attend college or is already enrolled.

There are students who

Creating a realistic list of expenses will help you pay for the essentials and avoid going into debt or taking out additional loans.

Developing an annual budget can be a painstaking process. Sticking to it can be even harder. However, it's also rewarding. If you have a budget, you'll be more prepared than some of your peers, and it will be easier for you to stay on track and minimize unnecessary spending. In many ways, you'll be learning new things before college starts.

Some of the necessary collage expenses to be covered by students are as follows

1. Tuition

No matter where you go to school, tuition is the number one expense. Fees for courses can be anywhere from \$10,000 to \$40,000 or more. On the bright side, some of the most expensive private schools have more financial aid options.

2. Room and Board

3. Textbooks and other Supplies

4. Equipment

5. Transportation

6. Personal Expenses

Abstract

Our Project focuses on the different areas where college students have to spend their money before or after entering the college. In today's world the cost of education is increasing day by day because of which it is not always easy for middle class families to afford college expenditure for their children, a proper planning should be made beforehand so that no futuristic problems arise and there is no compromise with the education.

Students should also be aware of governmental and college aids available for them if they are going through crisis and are not able to pay for their tuition fees, books etc.

This project helps in analysing the expenditure of students.

Content

Why this Topic?

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System Requirements:

Hardware-

Processor - Intel(R) Core(TM) i3-2120 CPU @ 3.30GHz 3.30 GHz

Installed RAM - 6.00 GB

Device ID - 7A0BCFOC-CD6C-4056-8550-709C83782E90

Product ID - 00330-80186-01498-AA613

System type - 64-bit operating system, x64-based processor

Pen and Touch- No pen or touch input is available for this display

Software-

Windows OS

Python

Microsoft Excel

Technology Used

Python –

Python programming language was developed by Guido Van Rossum in February 1991. Python is based on or influenced with two programming languages: > ABC language, a teaching language created as a replacement of BASIC, and Modula-3 Python is an easy-to-learn yet powerful object oriented programming language.

Pandas –

Python Pandas is Python's library for data analysis. Pandas have derived its name from "panel data system", which is an econometrics term for multidimensional, structured data sets. It is an open source, BSD library built python programming language. It offers high-performance, easy-to-use data structures and data analysis tools.

DataFrame -

DataFrame is another Pandas structure, which stores data in two-dimensional way. It is actually a two Dimensional [tabular and spreadsheet like] labeled array, which is actually an ordered collection of columns where columns may store different types of data, e.g., numeric or string or floating point or Boolean type etc.

CSV –

CSV is a simple file format used to store tabular data, such as a spreadsheet or database. Files in the CSV format can be imported to and exported from programs that store data in tables, such as Microsoft Excel or Open Office Calc. CSV stands for "Comma-Separated Values."

Matplotlib -

Matplotlib is a data visualization package for the Python programming language which is the most basic and widely used method for plotting data in Python.

It includes tools for creating publication-standard plots and figures in a number of export formats and environments (pycharm, jupyter notebook) across platforms.

- It is a data visualization package for the Python programming language.
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DATASET

Expenses	Country A	Country B	Country C
Accommodation	45	35	30
Food	22	28	36
Books	3	9	21
Leisure	22	23	12
Others	8	5	1

Codes and Implementation

Here is the code and implementation of the data for which we have chosen an online python complier.

IDLE (Integrated Development and Learning Environment) is an integrated development environment (IDE) for Python. The Python installer for Windows contains the IDLE module by default. IDLE is not available by default in Python distributions for Linux. It needs to be installed using the respective package managers.

INPUT

```
import pandas as pd
import matplotlib.pyplot as plt
HELP_TEXT = """
This is a program to show the expenditure per month of students
from 3 different countries.
1 - Representation of the expenditure by students using pie chart
    A - Country A
    B - Country B
    C - Country C
2 - Representation of the expenditure by the students using
multiple bar plots
3 - Representation of the expenditure by the students using
scatter chart
    A - Country A
    B - Country B
    C - Country C
q\quit - Quit
h\help - Print this help text
"""

# Creating a DataFrame from a CSV file.
df = pd.read_csv(r"C:\Users\Mythili\Desktop\Book1.csv")
def main():
    print (HELP_TEXT)
    print (df)

    while True:
```

```
choice = input("Choose an option for graphical  
representation: ")

if choice=='1':
    #For creating pie chart
    while True:
        choice1 = input("Country name: ")
        if choice1 == "A":
            print("Representation of expenditure by students  
from Country A using pie chart")
            x = df["Country A"]
            y = df["Expenses"]
            clr = ["aqua", "lime", "gold", "crimson", "lavender"]
            plt.title("Country A")
            plt.pie(x, labels = y, colors = clr, autopct = "%1.2f%%")
            plt.show()
            break
        elif choice1 == "B":
            print("Representation of expenditure by students  
from Country B using pie chart")
            x = df["Country B"]
            y = df["Expenses"]
            clr = ["aqua", "lime", "gold", "crimson", "lavender"]
            plt.title("Country B")
            plt.pie(x, labels = y, colors = clr, autopct = "%1.2f%%")
            plt.show()
            break
        elif choice1 == "C":
```

```
        print("Representation of expenditure by students
from Country C using pie chart")
        x = df["Country C"]
        y = df["Expenses"]
        clr = ["aqua", "lime", "gold", "crimson", "lavender"]
        plt.title("Country C")
        plt.pie(x, labels = y, colors = clr, autopct = "%1.2f%%")
        plt.show()
        break
    else:
        print(
            f"{choice1} is not a valid option. Enter 'help' to get
all valid options."
        )
        print("\n")
        break
    elif choice == "2":
        #For creating multiple bar plot
        print("Representation of the Expenditure of the 3
countries using multiple bar plots")
        df.plot(x="Expenses", y=["Country A", "Country B",
"Country C"], kind="bar", color = ["aqua", "crimson", "lime"])
        plt.ylabel("Percentage")
        plt.xticks(rotation = 20)
        plt.title("Expenditure vs. Percentage")
        plt.show()

    elif choice == "3":
```

```
#For creating scatter plot
while True:
    choice3 = input("Country name: ")
    if choice3 == "A":
        print("Representation of expenditure by students
from Country A using scatter chart")
        x = df["Country A"]
        y = df["Expenses"]
        plt.scatter(y,x, color = "cyan")
        plt.xlabel("Expenses")
        plt.ylabel("Percentage")
        plt.title("Country A")
        plt.show()
        break
    elif choice3 == "B":
        print("Representation of expenditure by students
from Country B using scatter chart")
        x = df["Country B"]
        y = df["Expenses"]
        plt.scatter(y,x, color = "cyan")
        plt.xlabel("Expenses")
        plt.ylabel("Percentage")
        plt.title("Country B")
        plt.show()
        break
    elif choice3 == "C":
        print("Representation of expenditure by students
from Country C using scatter chart")
```

```
        x = df["Country C"]
        y = df["Expenses"]
        plt.scatter(y,x, color = "cyan")
        plt.xlabel("Expenses")
        plt.ylabel("Percentage")
        plt.title("Country C")
        plt.show()
        break
    else:
        print(
            f"{choice3} is not a valid option. Enter 'help' to get
all valid options."
        )
        print("\n")
        break
    elif choice in ("h" ,"help"):
        print(HELP_TEXT)
    elif choice in ("q" ,"quit"):
        print("Quit ")
        return
    else:
        print(
            f"{choice} is not a valid option. Enter 'help' to get all
valid options."
        )
        print("\n")
        continue
main()
```

OUTPUT

This is a program to show the expenditure per month of students from 3 different countries.

- 1 - Representation of the expenditure by students using pie chart
 - A - Country A
 - B - Country B
 - C - Country C
- 2 - Representation of the expenditure by the students using multiple bar plots
- 3 - Representation of the expenditure by the students using scatter chart
 - A - Country A
 - B - Country B
 - C - Country C
- q\quit - Quit
- h\help - Print this help text

	Expenses	Country A	Country B	Country C
0	Accommodation	45	35	30
1	Food	22	28	36
2	Books	3	9	21
3	Leisure	22	23	12
4	Others	8	5	1

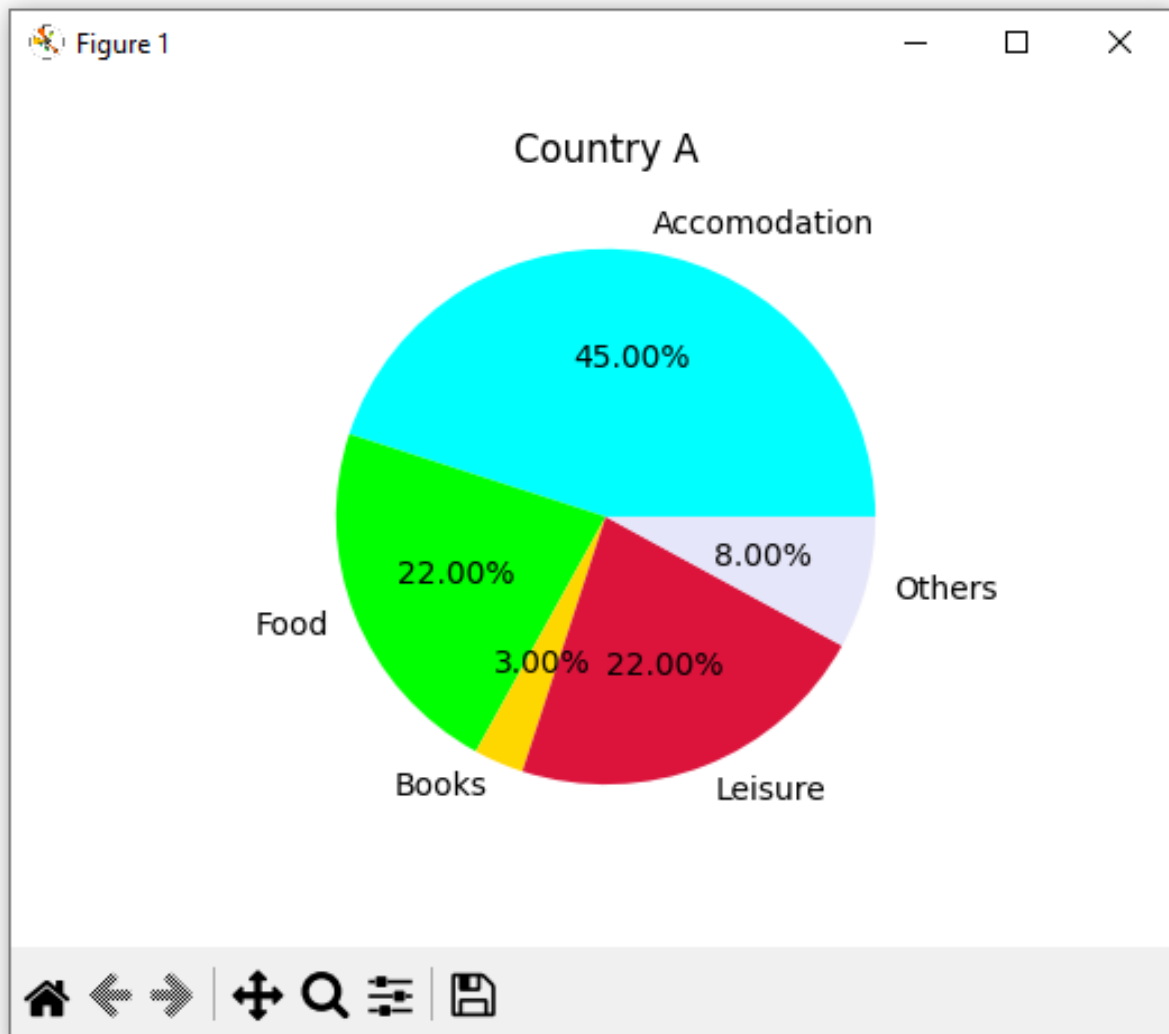
Choose an option for graphical representation: |

For option '1' in the graphical representation with country name as 'A':

Choose an option for graphical representation: 1

Country name: A

Representation of expenditure by students from Country A using pie chart

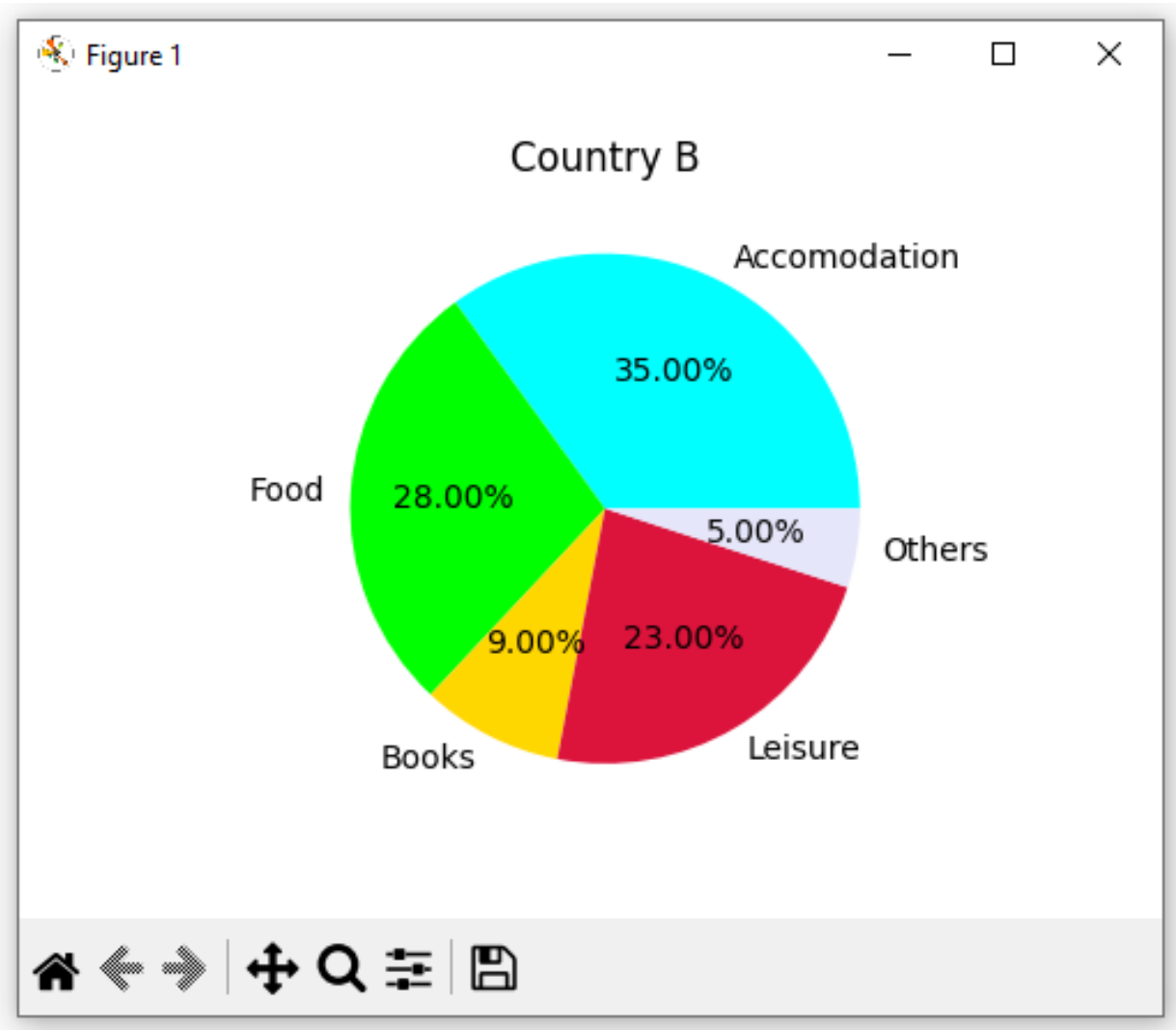


For option '1' in the graphical representation with country name as 'B':

Choose an option for graphical representation: 1

Country name: B

Representation of expenditure by students from Country B using pie chart

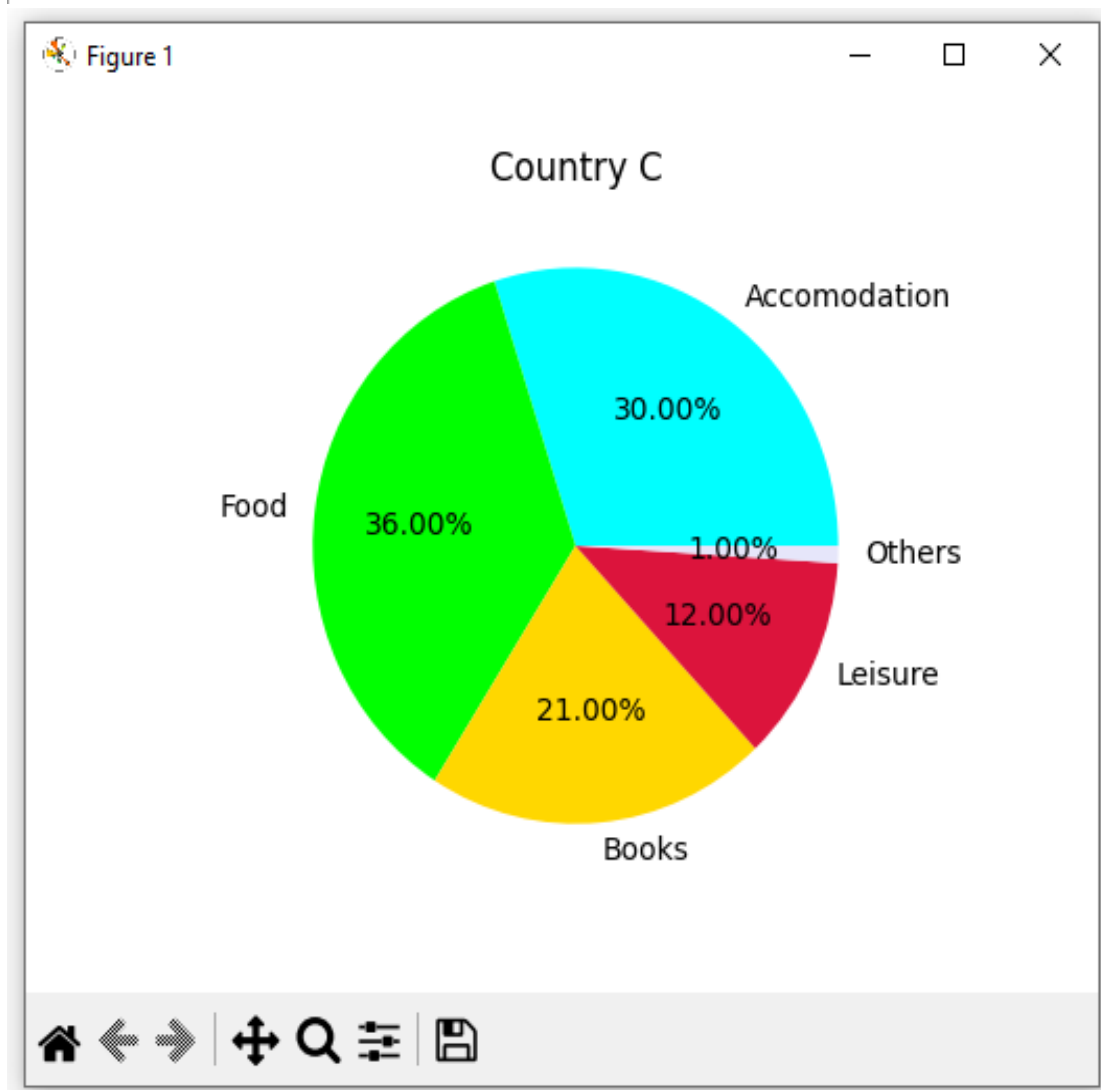


For option '1' in the graphical representation with country name as 'C':

Choose an option for graphical representation: 1

Country name: C

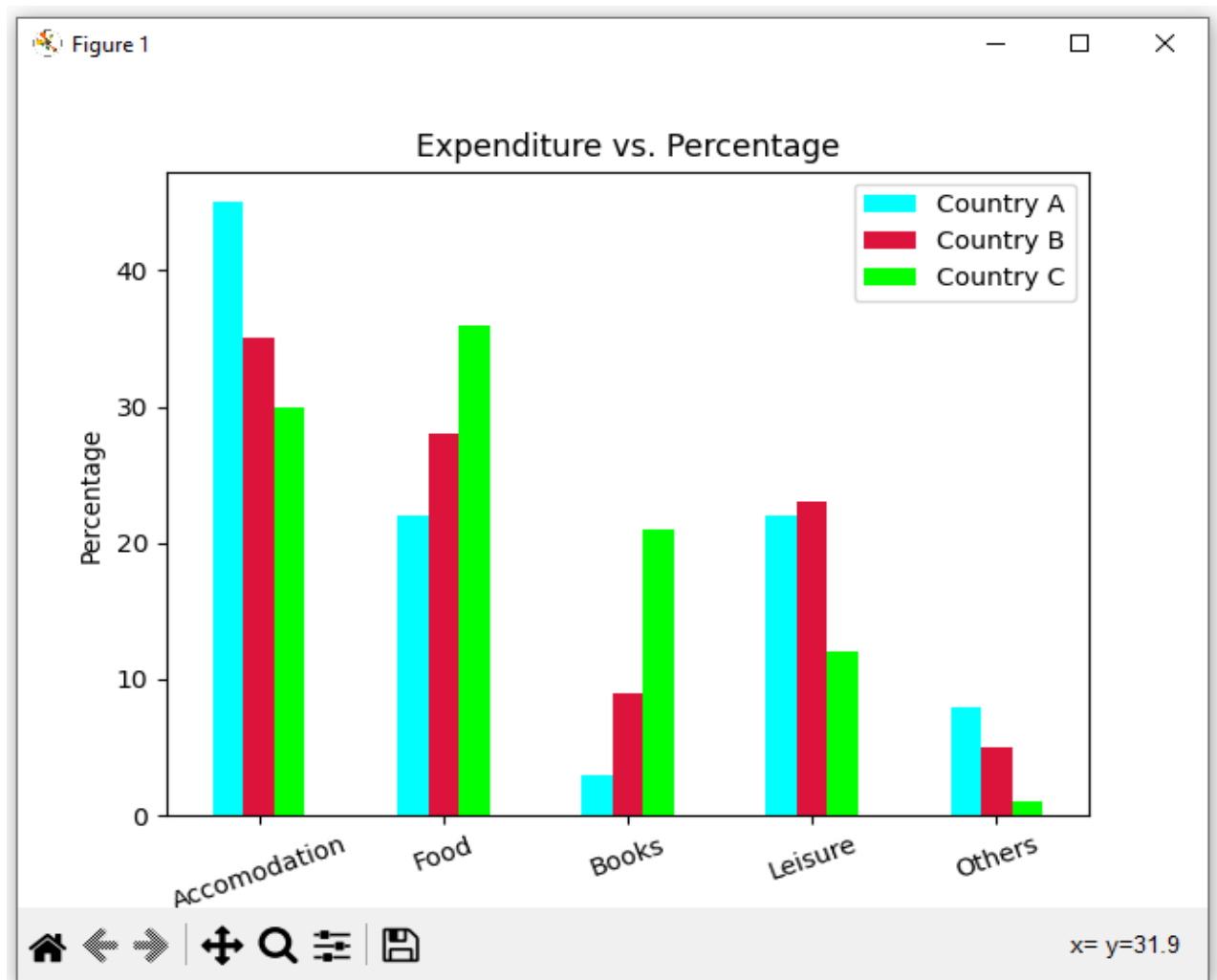
Representation of expenditure by students from Country C using pie chart



For option '2' in the graphical representation:

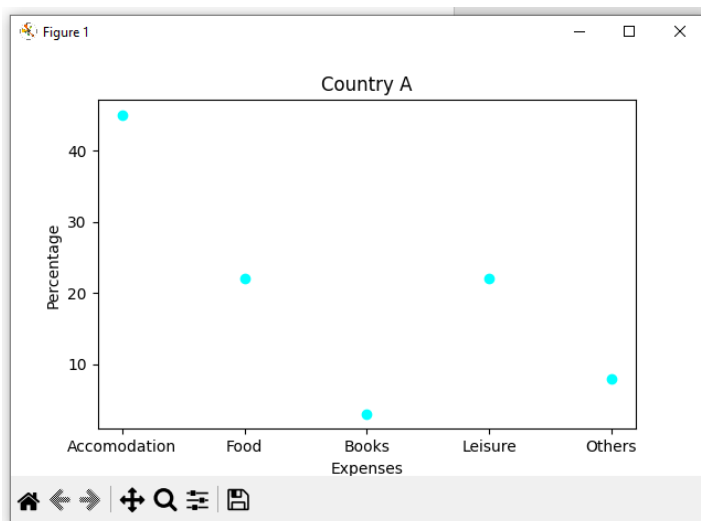
Choose an option for graphical representation: 2

Representation of the Expenditure of the 3 countries using multiple bar plots



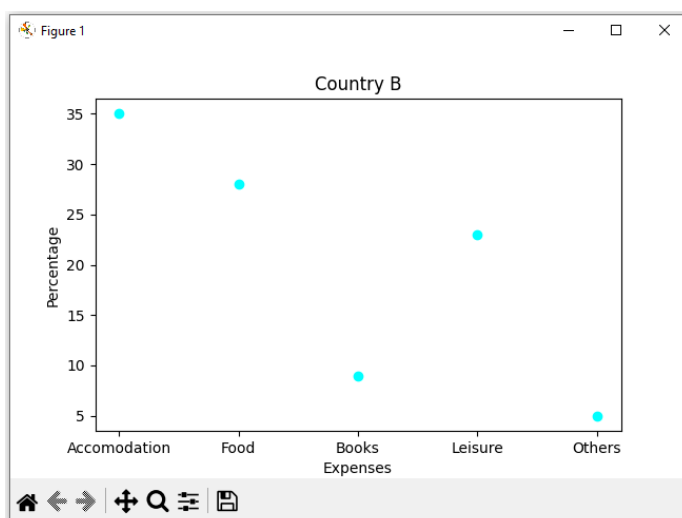
For option '3' in the graphical representation with country name as 'A':

Choose an option for graphical representation: 3
country name: A
Representation of expenditure by students from Country A using scatter chart



For option '3' in the graphical representation with country name as 'B':

Choose an option for graphical representation: 3
country name: B
Representation of expenditure by students from Country B using scatter chart

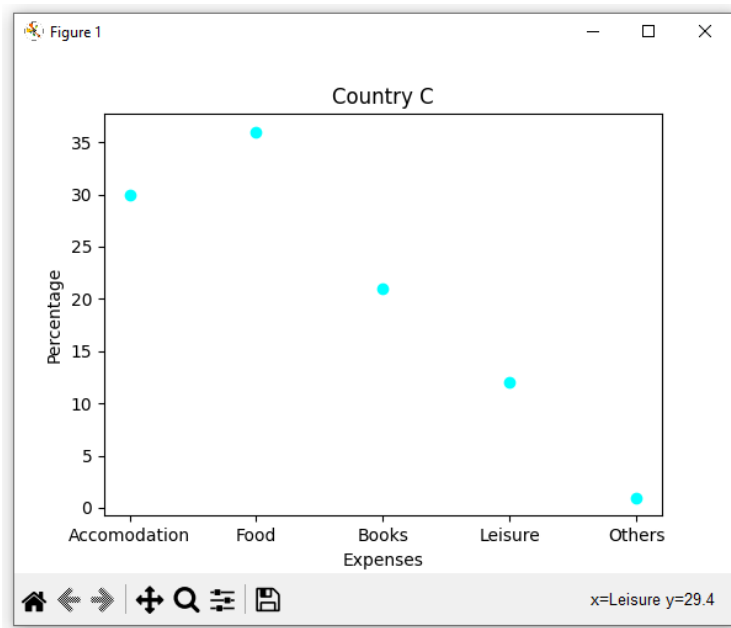


For option '3' in the graphical representation with country name as 'C':

Choose an option for graphical representation: 3

country name: C

Representation of expenditure by students from Country C using scatter chart



Future scope for Modification

If this software is developed with help of a big database like oracle, the software's demand will further increase.

As this software is very cheap, its affordability will be more in future.

Bibliography

- <https://collegedunia.com/news/e-482-average-annual-spending-of-university-students-in-3-different-countries-ielts-writing-task-1>
- <https://www.collegechoice.net/college-life/major-expenses-for-students/>
- Sample project given by Dipshika Banerjee ma'am