INFORMATICS PROJECT

PROJECT

ON

INDIAN FOOD

Vineeta Garg

NAME:

CLASS:

ROLL NO. :

CERTIFICATE

This is to certify that _____ of class _____, _____ School, has successfully completed her Investigatory Project as prescribed by CBSE in the year _____.

Date :

Roll No. :

Signature of Subject Teacher

Signature of External Examiner

_____ _____

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ACKNOWLEDGEMENT

It would be my utmost pleasure to thank my Computer Science teacher _____ for giving me this knowledgeable topic "INDIAN FOOD" and supporting me during the course of this project. I would also like to thank my parents and God for encouraging me and giving me strength to complete this project on time.

Secondly, I also like to thank my partner for being co-operative and pally with me throughout the process and for helping me to make this a full proof success.

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PROGRAM CODE

```
import pandas as pd

import matplotlib.pyplot as plt


#Importing CSV file into a dataframe

IndianFood=pd.read_csv("IndianFood.CSV")

print(IndianFood)

#Main Menu

while(True):

    print("\n\n\n\t\t############# MAIN MENU ###############")

    print("\n\t\t\t 1. Add Data       ")

    print("\n\t\t\t 2. Modify Data     ")

    print("\n\t\t\t 3. Delete Data     ")

    print("\n\t\t\t 4. Search Data     ")

    print("\n\t\t\t 5. Visualize Data  ")

    print("\n\t\t\t 6. Analyse Data    ")

    print("\n\t\t\t 7. Exit           ")

    print("\t\t##############################################")

    ch=int(input("\t\tEnter your choice 1-7: "))
```

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```
if (ch==1):
    while(True):
        print("Add Menu")
        print("1. Add new column")
        print("2. Add new row")
        print("3. Exit")
        ch1=int(input("Enter your choice 1-3"))
        if (ch1==1):
            name=input("Enter the name of the new column")
            data=input("Enter the value by which you want to initialize this column")
            IndianFood[name]=data
            print(IndianFood)
        elif (ch1==2):
            name=input("Enter name of the Indian Food")
            ingredient=input("Enter ingredient")
            diet=input("Enter diet")
            prep=int(input("Enter preparation time"))
            cook=int(input("Enter cooking time"))
            flavor=input("Enter flavor profile")
            course=input("Enter course")
            state=input("Enter state")
```

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```
            region=input("Enter region")
            countrec=IndianFood.shape[0]
            IndianFood.loc[countrec]=[name,ingredient,diet,prep,cook,flavor,course,state,region]
            print(IndianFood)
        else:
            break

elif (ch==2):
    while(True):
        print("Modify Menu")
        print("1. Modify any particular value")
        print("2. Modify given food item details")
        print("3. Exit")
        ch1=int(input("Enter your choice 1-3"))
        if (ch1==1):
            data=input("Enter the new data")
            row=input("Enter row label")
            col=input("Enter column label")
            IndianFood.at[row,col]=data
            print(IndianFood)
        elif (ch1==2):
```

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```
        name=input("Enter name of the Indian Food")
        ingredient=input("Enter ingredient")
        diet=input("Enter diet")
        prep=int(input("Enter preparation time"))
        cook=int(input("Enter cooking time"))
        flavor=input("Enter flavor profile")
        course=input("Enter course")
        state=input("Enter state")
        region=input("Enter region")
        countrec=IndianFood.shape[0]
        IndianFood.loc[countrec]=[name,ingredient,diet,prep,cook,flavor,course,state,region]
        print(IndianFood)
    else:
        break

elif (ch==3):
  while(True):
    print("-----------------------------------------------------------------------")
    print("|                    Delete Menu                      |")
    print("| 1. Delete given food item details                   |")
    print("| 2. Delete records of a given state (any Indian state)   |")
```

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```
print("| 3. Delete records of a given region: East/West/North/South           |")
print("| 4. Delete records of a given course: dessert/main course/starter/snack |")
print("| 5. Delete records of a given flavor: sweet/spicy                     |")
print("| 6. Delete records of a given diet: vegetarian/non vegetarian         |")
print("| 7. Exit                                                              |")
print("------------------------------------------------------------------------")
ch1=int(input("Enter your choice 1-7: "))
if (ch1==1):
   data=input("Enter name of the Indian Food whose details are to be deleted")
   IndianFood.drop(IndianFood.loc[IndianFood['name']==data].index,inplace=True)
   print(IndianFood)
elif (ch1==2):
   stat=input("Enter name of the state whose details are to be deleted")
   IndianFood.drop(IndianFood.loc[IndianFood['state']==stat].index,inplace=True)
   print(IndianFood)
elif (ch1==3):
   stat=input("Enter name of the region whose details are to be deleted")
   IndianFood.drop(IndianFood.loc[IndianFood['region']==stat].index,inplace=True)
   print(IndianFood)
elif (ch1==4):
   stat=input("Enter name of the course whose details are to be deleted")
```

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```
            IndianFood.drop(IndianFood.loc[IndianFood['course']==stat].index,inplace=True)
            print(IndianFood)
        elif (ch1==5):
            stat=input("Enter name of the flavor whose details are to be deleted")
            IndianFood.drop(IndianFood.loc[IndianFood['flavor_profile']==stat].index,inplace=True)
            print(IndianFood)
        elif (ch1==6):
            stat=input("Enter name of the diet whose details are to be deleted")
            IndianFood.drop(IndianFood.loc[IndianFood['diet']==stat].index,inplace=True)
            print(IndianFood)
        else:
            break
elif (ch==4):
    while(True):
        print("-----------------------------------------------------------------")
        print("|                    Search Menu                          |")
        print("| 1. Search given food item details                       |")
        print("| 2. Search records of a given state (any Indian state)   |")
        print("| 3. Search records of a given region: East/West/North/South  |")
        print("| 4. Search records of a given course: dessert/main course/starter/snack |")
        print("| 5. Search records of a given flavor: sweet/spicy        |")
```

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```
print("| 6. Search records of a given diet: vegetarian/non vegetarian          |")
print("| 7. Exit                                                              |")
print("------------------------------------------------------------------------")
ch1=int(input("Enter your choice 1-7"))
if (ch1==1):
   data=input("Enter name of the Indian Food whose details are to be displayed")
   print(IndianFood[IndianFood.name==data])

elif (ch1==2):
   data=input("Enter name of the state whose details are to be displayed")
   print(IndianFood[IndianFood.state==data])
elif (ch1==3):
   data=input("Enter name of the region whose details are to be displayed")
   print(IndianFood[IndianFood.region==data])
elif (ch1==4):
   data=input("Enter name of the course whose details are to be displayed")
   print(IndianFood[IndianFood.course==data])
elif (ch1==5):
   data=input("Enter name of the flavor whose details are to be displayed")
   print(IndianFood[IndianFood.flavor_profile==data])
```

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```
        elif (ch1==6):
            data=input("Enter name of the diet whose details are to be displayed")
            print(IndianFood[IndianFood.diet==data])
        else:
            break
elif (ch==5):
    while(True):
        print("-------------------------------------------------------------------------")
        print("|                    Visualize Menu                                    |")
        print("| 1. Visualize cooking time state wise                                 |")
        print("| 2. Visualize cooking time region: East/West/North/South wise         |")
        print("| 3. Visualize cooking time course: dessert/main course/starter/snack wise    |")
        print("| 4. Visualize cooking time flavor: sweet/spicy wise                   |")
        print("| 5. Visualize cooking time diet: vegetarian/non vegetarian wise       |")
        print("| 6. Visualize preparation time state wise                             |")
        print("| 7. Visualize preparation time region: East/West/North/South wise     |")
        print("| 8. Visualize preparation time course: dessert/main course/starter/snack wise|")
        print("| 9. Visualize preparation time flavor: sweet/spicy wise               |")
        print("| 10.Visualize preparation time diet: vegetarian/non vegetarian wise   |")
        print("| 11.Exit                                                              |")
        print("-------------------------------------------------------------------------")
```

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```
ch1=int(input("Enter your choice 1-11"))
if (ch1==1):
    ab=IndianFood.state
    cd=IndianFood.cook_time
    plt.title("Cooking Time of Indian dishes")
    plt.xlabel("Indian States")
    plt.ylabel("Cooking Time")
    plt.xticks(rotation=30)
    plt.grid(True)
    print("----------------------")
    print("| 1. Line Chart      |")
    print("| 2. Bar Chart       |")
    print("----------------------")
    print("Select the type of chart")
    type=int(input("Enter choice 1-2"))
    if (type==1):
        plt.plot(ab,cd,label="cook_time")
        plt.show()
    elif (type==2):
        plt.bar(ab,cd,label="cook_time")
```

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```
        plt.show()
    else:
        print("Invalid choice")
elif (ch1==2):
    ab=IndianFood.region
    cd=IndianFood.cook_time
    plt.title("Cooking Time of Indian dishes")
    plt.xlabel("Regions")
    plt.ylabel("Cooking Time")
    plt.xticks(rotation=30)
    plt.grid(True)
    print("----------------------")
    print("| 1. Line Chart      |")
    print("| 2. Bar Chart       |")
    print("----------------------")
    print("Select the type of chart")
    type=int(input("Enter choice 1-2"))
    if (type==1):
        plt.plot(ab,cd,label="cook_time")
        plt.show()
    elif (type==2):
```

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```
        plt.bar(ab,cd,label="cook_time")
        plt.show()
    else:
        print("Invalid choice")

elif (ch1==3):
    ab=IndianFood.course
    cd=IndianFood.cook_time
    plt.title("Cooking Time of Indian dishes")
    plt.xlabel("Course")
    plt.ylabel("Cooking Time")
    plt.xticks(rotation=30)
    plt.grid(True)
    print("----------------------")
    print("| 1. Line Chart      |")
    print("| 2. Bar Chart       |")
    print("----------------------")
    print("Select the type of chart")
    type=int(input("Enter choice 1-2"))
    if (type==1):
        plt.plot(ab,cd,label="cook_time")
```

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```
            plt.show()
        elif (type==2):
            plt.bar(ab,cd,label="cook_time")
            plt.show()
        else:
            print("Invalid choice")
    elif (ch1==4):
        ab=IndianFood.flavor_profile
        cd=IndianFood.cook_time
        plt.title("Cooking Time of Indian dishes")
        plt.xlabel("Flavors")
        plt.ylabel("Cooking Time")
        plt.xticks(rotation=30)
        plt.grid(True)
        print("----------------------")
        print("| 1. Line Chart      |")
        print("| 2. Bar Chart       |")
        print("----------------------")
        print("Select the type of chart")
        type=int(input("Enter choice 1-2"))
        if (type==1):
```

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```
        plt.plot(ab,cd,label="cook_time")
        plt.show()
    elif (type==2):
        plt.bar(ab,cd,label="cook_time")
        plt.show()
    else:
        print("Invalid choice")
elif (ch1==5):
    ab=IndianFood.diet
    cd=IndianFood.cook_time
    plt.title("Cooking Time of Indian dishes")
    plt.xlabel("Diet")
    plt.ylabel("Cooking Time")
    plt.xticks(rotation=30)
    plt.grid(True)
    print("----------------------")
    print("|1. Line Chart      |")
    print("| 2. Bar Chart      |")
    print("----------------------")
    print("Select the type of chart")
    type=int(input("Enter choice 1-2"))
```

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```
    if (type==1):
        plt.plot(ab,cd,label="cook_time")
        plt.show()
    elif (type==2):
        plt.bar(ab,cd,label="cook_time")
        plt.show()
    else:
        print("Invalid choice")

elif (ch1==6):
    ab=IndianFood.state
    cd=IndianFood.prep_time
    plt.title("Preparation Time of Indian dishes")
    plt.xlabel("Indian States")
    plt.ylabel("Preparation Time")
    plt.xticks(rotation=30)
    plt.grid(True)
    print("----------------------")
    print("| 1. Line Chart      |")
    print("| 2. Bar Chart       |")
    print("----------------------")
```

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```
    print("Select the type of chart")
    type=int(input("Enter choice 1-2"))
    if (type==1):
        plt.plot(ab,cd,label="prep_time")
        plt.show()
    elif (type==2):
        plt.bar(ab,cd,label="prep_time")
        plt.show()
    else:
        print("Invalid choice")

elif (ch1==7):
    ab=IndianFood.region
    cd=IndianFood.prep_time
    plt.title("Preparation Time of Indian dishes")
    plt.xlabel("Regions")
    plt.ylabel("Preparation Time")
    plt.xticks(rotation=30)
    plt.grid(True)
    print("----------------------")
    print("| 1. Line Chart      |")
```

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```
    print("| 2. Bar Chart      |")
    print("----------------------")
    print("Select the type of chart")
    type=int(input("Enter choice 1-2"))
    if (type==1):
       plt.plot(ab,cd,label="prep_time")
       plt.show()
    elif (type==2):
       plt.bar(ab,cd,label="prep_time")
       plt.show()
    else:
       print("Invalid choice")
elif (ch1==8):
    ab=IndianFood.course
    cd=IndianFood.prep_time
    plt.title("Preparation Time of Indian dishes")
    plt.xlabel("Course")
    plt.ylabel("Preparation Time")
    plt.xticks(rotation=30)
    plt.grid(True)
    print("----------------------")
```

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```
    print("| 1. Line Chart      |")
    print("| 2. Bar Chart       |")
    print("----------------------")
    print("Select the type of chart")
    type=int(input("Enter choice 1-2"))
    if (type==1):
       plt.plot(ab,cd,label="prep_time")
       plt.show()
    elif (type==2):
       plt.bar(ab,cd,label="prep_time")
       plt.show()
    else:
       print("Invalid choice")
elif (ch1==9):
    ab=IndianFood.flavor_profile
    cd=IndianFood.prep_time
    plt.title("Preparation Time of Indian dishes")
    plt.xlabel("Flavors")
    plt.ylabel("Preparation Time")
    plt.xticks(rotation=30)
    plt.grid(True)
```

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```
        print("----------------------")
        print("| 1. Line Chart      |")
        print("| 2. Bar Chart       |")
        print("----------------------")
        print("Select the type of chart")
        type=int(input("Enter choice 1-2"))
        if (type==1):
            plt.plot(ab,cd,label="prep_time")
            plt.show()
        elif (type==2):
            plt.bar(ab,cd,label="prep_time")
            plt.show()
        else:
            print("Invalid choice")
    elif (ch1==10):
        ab=IndianFood.diet
        cd=IndianFood.prep_time
        plt.title("Preparation Time of Indian dishes")
        plt.xlabel("Diet")
        plt.ylabel("Preparation Time")
        plt.xticks(rotation=30)
```

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```
            plt.grid(True)
            print("----------------------")
            print("| 1. Line Chart      |")
            print("| 2. Bar Chart       |")
            print("----------------------")
            print("Select the type of chart")
            type=int(input("Enter choice 1-2"))
            if (type==1):
               plt.plot(ab,cd,label="prep_time")
               plt.show()
            elif (type==2):
               plt.bar(ab,cd,label="prep_time")
               plt.show()
            else:
               print("Invalid choice")
         else:
            break
elif (ch==6):
   while(True):
      print("-------------------------------------------------------------")
      print("|                Data Analysis Menu                    |")
```

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```
print("| 1. State wise(any Indian state) analysis                    |")
print("| 2. Region: East/West/North/South wise analysis              |")
print("| 3. Course: dessert/main course/starter/snack wise analysis  |")
print("| 4. Diet: vegetarian/non vegetarian wise analysis            |")
print("| 5. Flavor: sweet/spicy wise analysis                        |")
print("| 6. Exit                                                     |")
print("-------------------------------------------------------------")
ch1=int(input("Enter your choice 1-6"))
if (ch1==1):
   stat=input("Enter State")
   print("-----------------------------------")
   print("| 1. Minimum Cooking Time       |")
   print("| 2. Maximum Cooking Time       |")
   print("| 3. Count Number of Food Items |")
   print("-----------------------------------")
   ch2=int(input("Enter choice"))
   if (ch2==1):
      k=IndianFood.loc[IndianFood['state']==stat].cook_time
      print(min(k))
   elif (ch2==2):
      k=IndianFood.loc[IndianFood['state']==stat].cook_time
```

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```
        print(max(k))
    elif (ch2==3):
        k=IndianFood.loc[IndianFood['state']==stat].index
        print(len(k))
    else:
        print("Invalid choice")
elif (ch1==2):
    regi=input("Enter Region")
    print("-------------------------------------")
    print("| 1. Minimum Cooking Time         |")
    print("| 2. Maximum Cooking Time         |")
    print("| 3. Count Number of Food Items   |")
    print("-------------------------------------")
    ch2=int(input("Enter choice"))
    if (ch2==1):
        k=IndianFood.loc[IndianFood['region']==regi].cook_time
        print(min(k))
    elif (ch2==2):
        k=IndianFood.loc[IndianFood['region']==regi].cook_time
        print(max(k))
    elif (ch2==3):
```

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```
        k=IndianFood.loc[IndianFood['region']==regi].index
        print(len(k))
    else:
        print("Invalid choice")
elif (ch1==3):
    cour=input("Enter Course")
    print("-------------------------------------")
    print("| 1. Minimum Cooking Time         |")
    print("| 2. Maximum Cooking Time         |")
    print("| 3. Count Number of Food Items    |")
    print("-------------------------------------")
    ch2=int(input("Enter choice"))
    if (ch2==1):
        k=IndianFood.loc[IndianFood['course']==cour].cook_time
        print(min(k))
    elif (ch2==2):
        k=IndianFood.loc[IndianFood['course']==cour].cook_time
        print(max(k))
    elif (ch2==3):
        k=IndianFood.loc[IndianFood['course']==cour].index
        print(len(k))
```

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```
    else:
        print("Invalid choice")

elif (ch1==4):
    die=input("Enter Diet")
    print("-------------------------------------")
    print("| 1. Minimum Cooking Time         |")
    print("| 2. Maximum Cooking Time         |")
    print("| 3. Count Number of Food Items    |")
    print("-------------------------------------")
    ch2=int(input("Enter choice"))
    if (ch2==1):
        k=IndianFood.loc[IndianFood['diet']==die].cook_time
        print(min(k))
    elif (ch2==2):
        k=IndianFood.loc[IndianFood['diet']==die].cook_time
        print(max(k))
    elif (ch2==3):
        k=IndianFood.loc[IndianFood['diet']==die].index
        print(len(k))
    else:
```

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```
        print("Invalid choice")
    elif (ch1==5):
        flavor=input("Enter Flavor")
        print("-------------------------------------")
        print("| 1. Minimum Cooking Time         |")
        print("| 2. Maximum Cooking Time         |")
        print("| 3. Count Number of Food Items    |")
        print("-------------------------------------")
        ch2=int(input("Enter choice"))
        if (ch2==1):
            k=IndianFood.loc[IndianFood['flavor_profile']==flavor].cook_time
            print(min(k))
        elif (ch2==2):
            k=IndianFood.loc[IndianFood['flavor_profile']==flavor].cook_time
            print(max(k))
        elif (ch2==3):
            k=IndianFood.loc[IndianFood['flavor_profile']==flavor].index
            print(len(k))
        else:
            print("Invalid choice")
    else:
```

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```
            break
    else:
        print("aaaa")
        break

rep=input("Do you want to store the changes done permanently y/n")

if (rep=="y" or rep=="Y"):
    IndianFood.to_csv("IndianFood.csv")
    print("Changes saved permanently")
else:
    print("Changes not saved")
```

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OUTPUT SCREENSHOTS

```
############ MAIN MENU ###############

          1. Add Data

          2. Modify Data

          3. Delete Data

          4. Search Data

          5. Visualize Data

          6. Analyse Data

          7. Exit
########################################
Enter your choice 1-7: 1
```

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```
Add Menu
1. Add new column
2. Add new row
3. Exit
Enter your choice 1-31
Enter the name of the new columnDiscount
Enter the value by which you want to initialize this column0
                  name  ... Discount
0           Balu shahi  ...        0
1               Boondi  ...        0
2       Gajar ka halwa  ...        0
3               Ghevar  ...        0
4          Gulab jamun  ...        0
..                 ...  ...      ...
108  Prawn malai curry  ...        0
109             Shukto  ...        0
110          Til Pitha  ...        0
111            Bebinca  ...        0
112          Mawa Bati  ...        0

[113 rows x 10 columns]
Add Menu
1. Add new column
2. Add new row
3. Exit
Enter your choice 1-32
```

```
            ############ MAIN MENU ###############

                    1. Add Data

                    2. Modify Data

                    3. Delete Data

                    4. Search Data

                    5. Visualize Data

                    6. Analyse Data

                    7. Exit
                ##########################################
                Enter your choice 1-7: 2
Modify Menu
1. Modify any particular value
2. Modify given food item details
3. Exit
Enter your choice 1-32
Enter name of the Indian FoodPhirni
Enter ingredientrice,milk,sugar
Enter dietvegetarian
```

```
Enter preparation time10
Enter cooking time40
Enter flavor profilesweet
Enter coursedessert
Enter stateUP
Enter regionNorth
                name  ...       region
0         Balu shahi  ...         East
1              Boondi  ...         West
2    Gajar ka halwa  ...        North
3              Ghevar  ...         West
4        Gulab jamun  ...         East
..               ...  ...          ...
109           Shukto  ...         East
110        Til Pitha  ...  North East
111          Bebinca  ...         West
112        Mawa Bati  ...      Central
113           Phirni  ...        North

[114 rows x 9 columns]
Modify Menu
1. Modify any particular value
2. Modify given food item details
3. Exit
Enter your choice 1-3
```

```
############ MAIN MENU ###############

          1. Add Data

          2. Modify Data

          3. Delete Data

          4. Search Data

          5. Visualize Data

          6. Analyse Data

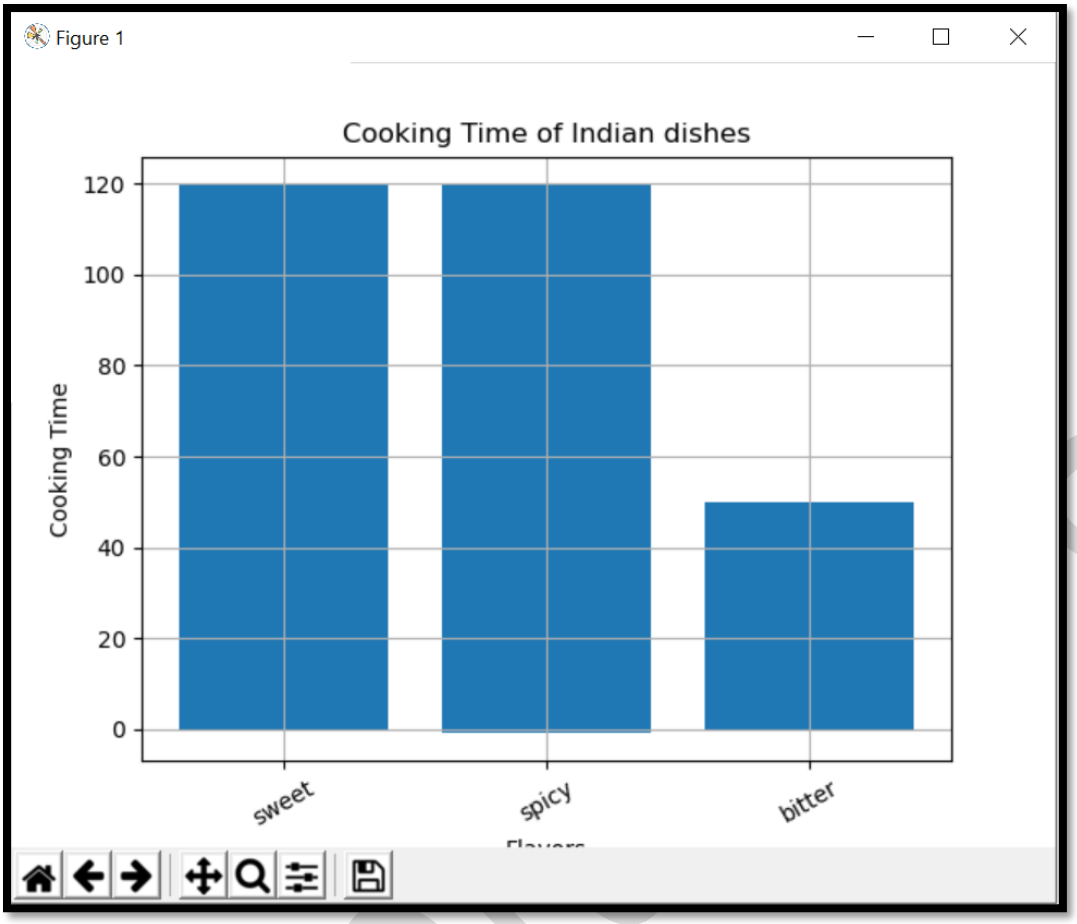
          7. Exit
##########################################
Enter your choice 1-7: 4
```

```
-------------------------------------------------------------------------
|                            Search Menu                                |
| 1. Search given food item details                                     |
| 2. Search records of a given state (any Indian state)                 |
| 3. Search records of a given region: East/West/North/South            |
| 4. Search records of a given course: dessert/main course/starter/snack |
| 5. Search records of a given flavor: sweet/spicy                      |
| 6. Search records of a given diet: vegetarian/non vegetarian          |
| 7. Exit                                                               |
-------------------------------------------------------------------------
Enter your choice 1-71
Enter name of the Indian Food whose details are to be displayedPhirni
      name      ingredients        diet  ...   course  state region
113  Phirni  rice,milk,sugar  vegetarian  ...  dessert     UP  North

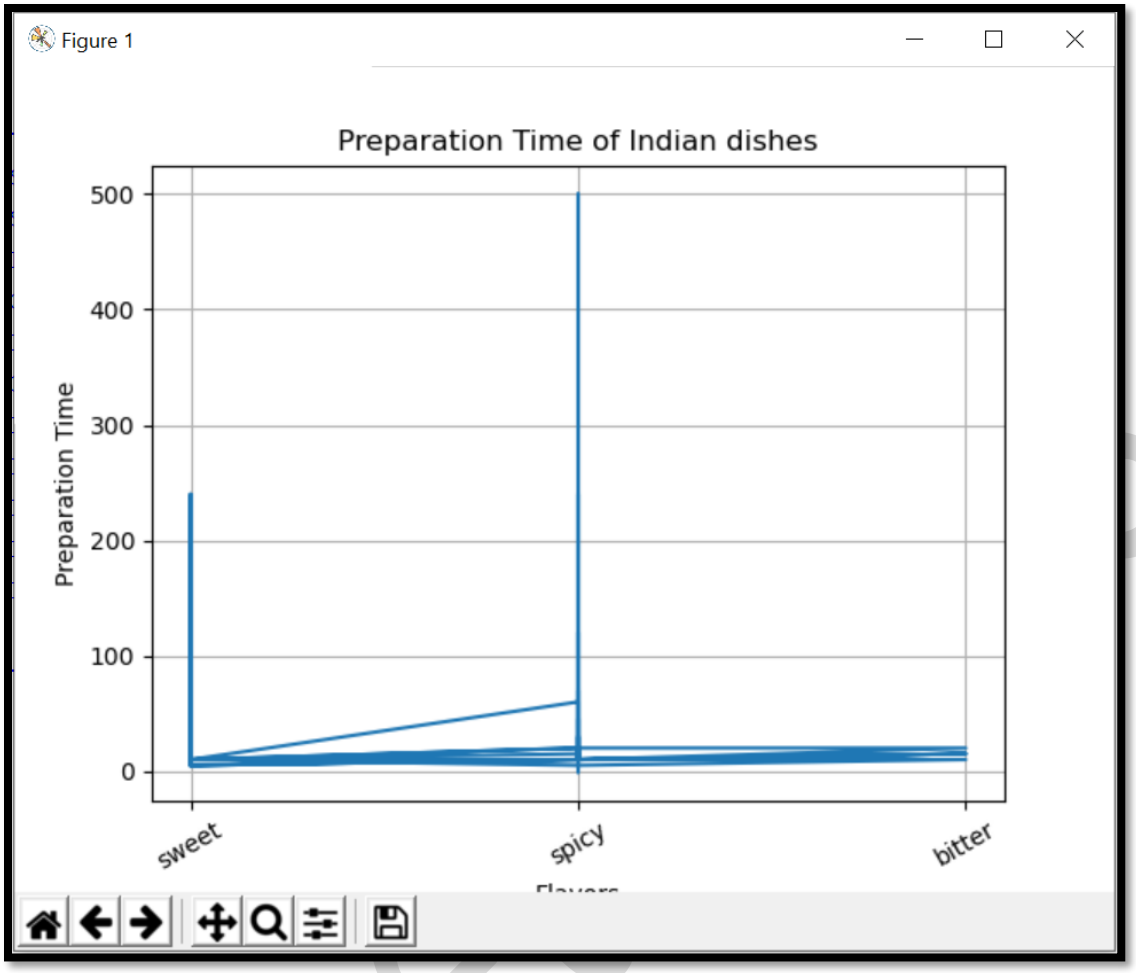
[1 rows x 9 columns]
```

```
Enter name of the state whose details are to be displayedPunjab
                            name  ... region
2                  Gajar ka halwa  ...  North
37                     Aloo tikki  ...  North
38                     Aloo matar  ...  North
39                     Aloo methi  ...  North
40              Aloo shimla mirch  ...  North
41                        Bhatura  ...  North
42                  Bhindi masala  ...  North
45                   Chana masala  ...  North
47           Chicken Tikka masala  ...  North
48                  Chicken Tikka  ...  North
50                   Kadai paneer  ...  North
52                   Karela bharta  ...  North
56  Makki di roti sarson da saag  ...  North
57                      Misi roti  ...  North
58              Mushroom do pyaza  ...  North
59                 Mushroom matar  ...  North
61                   Palak paneer  ...  North
62           Paneer butter masala  ...  North
63            Paneer tikka masala  ...  North
65                        Paratha  ...  North
67                   Pindi chana  ...  North
69                   Shahi paneer  ...  North
71              Vegetable jalfrezi  ...  North
72                Tandoori Chicken  ...  North
```

```
-------------------------------------------------------------------------------
|                         Visualize Menu                                      |
| 1. Visualize cooking time state wise                                        |
| 2. Visualize cooking time region: East/West/North/South wise                |
| 3. Visualize cooking time course: dessert/main course/starter/snack wise    |
| 4. Visualize cooking time flavor: sweet/spicy wise                          |
| 5. Visualize cooking time diet: vegetarian/non vegetarian wise              |
| 6. Visualize preparation time state wise                                    |
| 7. Visualize preparation time region: East/West/North/South wise            |
| 8. Visualize preparation time course: dessert/main course/starter/snack wise|
| 9. Visualize preparation time flavor: sweet/spicy wise                      |
| 10.Visualize preparation time diet: vegetarian/non vegetarian wise          |
| 11.Exit                                                                     |
-------------------------------------------------------------------------------
Enter your choice 1-114
----------------------
| 1. Line Chart      |
| 2. Bar Chart       |
----------------------
Select the type of chart
Enter choice 1-22
```




```
-------------------------------------------------------------------------------
|                          Visualize Menu                                     |
| 1. Visualize cooking time state wise                                        |
| 2. Visualize cooking time region: East/West/North/South wise                |
| 3. Visualize cooking time course: dessert/main course/starter/snack wise    |
| 4. Visualize cooking time flavor: sweet/spicy wise                          |
| 5. Visualize cooking time diet: vegetarian/non vegetarian wise              |
| 6. Visualize preparation time state wise                                    |
| 7. Visualize preparation time region: East/West/North/South wise            |
| 8. Visualize preparation time course: dessert/main course/starter/snack wise|
| 9. Visualize preparation time flavor: sweet/spicy wise                      |
| 10.Visualize preparation time diet: vegetarian/non vegetarian wise          |
| 11.Exit                                                                     |
-------------------------------------------------------------------------------
Enter your choice 1-119
----------------------
| 1. Line Chart      |
| 2. Bar Chart       |
----------------------
Select the type of chart
Enter choice 1-21
```




```
-------------------------------------------------------------------
|                    Data Analysis Menu                           |
| 1. State wise(any Indian state) analysis                        |
| 2. Region: East/West/North/South wise analysis                  |
| 3. Course: dessert/main course/starter/snack wise analysis      |
| 4. Diet: vegetarian/non vegetarian wise analysis                |
| 5. Flavor: sweet/spicy wise analysis                            |
| 6. Exit                                                         |
-------------------------------------------------------------------
Enter your choice 1-61
Enter StatePunjab
-------------------------------------
| 1. Minimum Cooking Time           |
| 2. Maximum Cooking Time           |
| 3. Count Number of Food Items     |
-------------------------------------
Enter choice1
20
```

```
-------------------------------------------------------------------
|                    Data Analysis Menu                           |
| 1. State wise(any Indian state) analysis                        |
| 2. Region: East/West/North/South wise analysis                  |
| 3. Course: dessert/main course/starter/snack wise analysis      |
| 4. Diet: vegetarian/non vegetarian wise analysis                |
| 5. Flavor: sweet/spicy wise analysis                            |
| 6. Exit                                                         |
-------------------------------------------------------------------
Enter your choice 1-65
Enter Flavorsweet
-------------------------------------
| 1. Minimum Cooking Time           |
| 2. Maximum Cooking Time           |
| 3. Count Number of Food Items     |
-------------------------------------
Enter choice3
45
```

Vineeta