INFORMATICS PRACTICES

PROJECT FILE

Teachers Name : Ms. Reeba Mariam Ninan

Students Name : Gaurav Rayat

Class : XII-SCIENCE

Project Name : The Analyser

TOPIC :- Analysis of crimes in India

CERTIFICATE

This is to certify that **Gaurav Rayat** of class **XII - Science** has successfully completed the project on **Crime and Murders** in India under the guidance of **Ms. Reeba Mariam Ninan** for the session 2021-2022.

Ms. Reeba Mariam Ninan
(PGT)

ACKNOWLEDGEMENT

It gives me immense pleasure in expressing a deep sense of gratitude to our helpful and respected teacher
Ms. Reeba Mariam Ninan,
for her guidance throughout the preparation of the project.

We are also thankful to all our teachers who helped us with their valuable suggestions.

Gaurav Rayat
XII - Science

PROJECT - SYNOPSIS

TITLE :- *The Analyser*

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Problem Definition:

Today we are continuously hearing about growth in Crime rates and the number of murders executed day by day.It is very unfortunate that we are living in the country known as the hub of criminals. About 3.5 lakhs crimes have been committed in just 12 years from 2001 to 2012. This is the most in any country ever recorded. So in order to decrease this awful rate of crime we need to analyse it from the core and this project "The Analyser '' helps us to do that.

Features :

1. Analyse different Criminal activities done in different States in particular Year.
2. Analyse murders done in various states in different Years.
3. Visualisation of criminal activities.
4. Visualisation of Murders in India.

Objective :

This software project is developed to review the number of Crimes and Murders that have been done from 2001 - 2012 in India.

The purpose of the project is to develop a program which provides a Command Line Friendly Interface for the user to review the number of Crimes in India.

The user can not make changes to the program since it is released under GNU GPL License.

Hardware Requirements :

A Computer or Laptop with

- **Windows 7 or Above / Linux / Mac**
- **CPU : Intel Celeron N3060 or Above**
- **RAM : 4 GB**
- **ROM : Minimum 10 GB**

Software Requirements :

- **Python 3.8.x or higher version**
- **Spreadsheets or Excel Installed.**
- **Matplotlib should be installed.**
- **Pandas should be installed.**
- **Rich should be installed.**

Limitations :

- It is not a web based project.
- More functionality can be added as per requirement.
- No provision to print hard copies.
- It does not visually interact with users as GUI.

References :

- kaggle.com.
- Python Documentation.
- Rich Documentation.
- Google.com
- NCERT textbooks

THEORETICAL BACKGROUND

- ## PYTHON - Language Used

Python is an interpreted, high-level and general-purpose programming language. Python's design philosophy emphasizes code readability with its notable use of significant whitespace. Its language constructs and Object-Oriented approach aim to help programmers write clear and logical code for small and large-scale projects.
Python is dynamically typed and garbage-collected. It supports multiple programming paradigms, including structured, object-oriented, and functional programming.
Python is often described as a "batteries included" language due to its comprehensive standard library. Python was created in the late **1980s**, and first released in **1991**, by **Guido Van Rossum** as a successor to the ABC programming language.

- ## PANDAS

In computer programming, **pandas** is a software library written for the Python programming language for data manipulation and analysis.
In particular, it offers data structures and operations for manipulating numerical tables and time series. It is free software released under the three-clause BSD license.

- ## MATPLOTLIB

Matplotlib is a plotting library for the Python programming language and its numerical mathematics extension **NumPy**. It provides an object-oriented API for embedding plots into applications using general-purpose GUI toolkits.

Matplotlib was originally written by John D. Hunter.

- ## PYPLOT(matplotlib.pyplot)

Matplotlib.pyplot is a collection of functions that make matplotlib work like MATLAB. Each pyplot function makes some change to a figure : e.g., creates a figure, creates a plotting area in a figure, plots some lines in a plotting area, decorates the plot with labels, etc.In matplotlib.pyplot various states are preserved across function calls, so that it keeps track of things like the current figure and plotting area, and the plotting functions are directed to the current axes.

- ## CSV FILES

The csv module gives the Python programmer the ability to parse CSV (Comma Separated Values) files. A CSV file is a human readable text file where each line has a number of fields, separated by commas or some other delimiter. The csv module will be able to read the vast majority of CSV.

- ## MySQLdb

MySQLdb is an interface for connecting to a MySQL database server from Python. It implements the Python Database API v2. 0 and is built on top of the MySQL C API. Packages to Install. mysql-connector-python mysql-python.

TOOLS USED

- **Linux Ubuntu LTS 20.04 as the operating system.**
- **Python 3.8.10**
- **Pandas 1.2.3**
- **Matplotlib 3.4.1**
- **Rich (Console Designer)**
- **VS Code for coding**
- **WPS Spreadsheets**

Project Links

- https://github.com/GAURAV-ROBUST/IP_Project_2022
- https://bit.ly/3FB48z2

Modules used

1. os
2. sys
3. time
4. datetime
5. pandas (EXTERNAL)
6. matplotlib (EXTERNAL)
7. rich (EXTERNAL)

CODE :

Importing desired Modules :

```
# Import commands
import os                               # Built - IN Modules
import sys                              # Built - IN Modules
import time                             # Built - IN Modules
from datetime import datetime           # Built - IN Modules

try:
   import MySQLdb as connector      #pip install MySQLdb
except:
   print("MySQLdb Not Installed")
   print("Installing MySQLdb")
   os.system("pip3 install MySQLdb")
   import MySQLdb as connector

try:
   from pandas import *
except:
   print("Installing Pandas....")
   os.system("pip3 install pandas")
   from pandas import *
```

```
try:
   from matplotlib import pyplot as plt
except:
   print("Installing Matplotlib....")
   os.system("pip3 install matplotlib")
   from matplotlib import pyplot as plt

try:
   from rich.console import Console
   from rich.markdown import Markdown
except:
   print("Installing Rich module....")
   os.system("pip3 install rich")
   try:
       from rich.console import Console
       from rich.markdown import Markdown
   except:
       print("Rich Can't be installed for some reason...")
       pass
try:
   console = Console()
except:
   pass

# Rich Styling
style = "cyan"
style1 = "yellow"
style2 = "magenta"
```

Creating Class and hence functions to be used in following program :

```
class main():
   # FUNCTIONS

   def p(x,style):           #Rich Handling if not installed properly
       try:
           console.print(x,style=style)
       except:
           print(x)
```

```
    def printer():      # Main Printer(Initial)
        try:
            console.print(Markdown("# The Analyser"))
            console.print("[bold] Talk is Cheap, Show me the Code[/bold] -- Linus
Torvalds".center(130),style="yellow")
        except:
            print("Welcome To The Analyser.....")
        main.p("1. Analyse Different Crimes in India.\n2. Analyse Murders.","cyan")
        main.p("3. Visualise Crimes\n4. Visualise Murders\n5. Entry Of Data To Database\n6.
Exit\n","cyan")

    def printer_8_9():    #crime printer of option 8 and 9
        main.p("1. Total number of crimes in particular age group.",style)
        main.p("2. Total number of crimes in particular age group in a given state.",style)
        main.p("3. Total number of crimes in particular age group in a given state in a given
year.",style)

    def crime_printer():    # Main Crime printer(All options)
        main.p("What do you want to do with data?",style=style)
        main.p("1. Total Number of crimes in India from 2001 to 2012.",style=style)
        main.p("2. Total Number of crimes in particular State.",style=style)
        main.p("3. Total Number of crimes in particular year.",style=style)
        main.p("4. Total Number of crimes in a state in particular year.",style=style)
        main.p("5. Particular Crime in the given year.",style=style)
        main.p("6. Particular Crime in the given State.",style=style)
        main.p("7. Particular Crime in the given State in given Year.",style=style)
        main.p("8. Analyse Crimes on Male(with Age group).",style=style)
        main.p("9. Analyse Crimes on Female(with age group)",style=style)
        main.p("10. Exit",style=style)

    def murder_printer():    #Murder printer Main (All options)
        main.p("What do you want to do with data?\n",style=style)
        main.p("1. Total Number of Murders in India from 2013",style=style)
        main.p("2. Total Number of Murders in particular State.",style=style)
        main.p("3. Murder of a Female(with Age group).",style=style)
        main.p("4. Murder of a Male(with age group)",style=style)
        main.p("5. Murder of a Female(with Age group) in specific state.",style=style)
        main.p("6. Murder of a male(with Age group) in specific state.",style=style)
        main.p("7. Exit")
```

```
   def murder_m_f(gen):
       if gen == "female":
           #Murder of female in a state with specific age group also.
                   df = murder.loc[1:len(murder.index)+1:3,['STATE/UT','Upto 10
years','10-15 years','15-18 years','18-30 years','30-50 years','Above 50 years']]
       elif gen == "male":
           #Murder of male in a state with specific age group also.
           df = murder.loc[0:len(murder.index)+1:3,['STATE/UT','Upto 10 years','10-15
years','15-18 years','18-30 years','30-50 years','Above 50 years']]
       list1 = []
       list_states = []
       dict1 ={}
       dict2 = {}
       sum = 0
       for index,cols in df.iteritems():
           if index == 'STATE/UT':
               for i in cols:
                   list_states.append(i)
           list1.append(index)
       list1.remove('STATE/UT')
       for index,value in enumerate(list1):
           main.p(f"{index+1}. {value}",style=style1)
           dict1[index+1] = value
       inp3 = int(input("Enter Your Choice :"))
       for index,value in enumerate(list_states):
           main.p(f"{index+1}. {value}",style=style1)
           dict2[index+1] = value
       inp4 = int(input("Enter Your Choice :"))
       df1 = df.loc[:,['STATE/UT',dict1[inp3]]]
       for index,row in df1.iterrows():
           if row[0] == dict2[inp4]:
               sum = row[1]
       print()
       main.p(f"Your Result :{sum}",style=style2)
       print()

   def m_f1(gen):    #Male female choice 1
```

```
        df = crimes.loc[13:len(crimes.index)+1:14,[f'{gen} upto 10 years',f'{gen} 10-15
years',f'{gen} 15-18 years',f'{gen} 18-30 years',f'{gen} 30-50 years',f'{gen} above 50
years']]
        list1 = []
        dict1 = {}
        sum = 0
        for index,cols in df.iteritems():
            list1.append(index)
        for index,values in enumerate(list1):
            main.p(f"{index+1}. {values}",style=style1)
            dict1[index+1] = values
        inp4 = int(input("Enter Your Choice :"))
        for index,cols in df.iteritems():
            if index == dict1[inp4]:
                cols.index = range(len(df.index))
                for i in range(len(df.index)):
                    sum+=cols[i]
        main.p(f"Total Number of crimes in {dict1[inp4]} = {sum}",style=style2)

    def m_f2(gen):  #Male female choice 2
        df = crimes.loc[13:len(crimes.index)+1:14,['STATE/UT',f'{gen} upto 10 years',f'{gen}
10-15 years',f'{gen} 15-18 years',f'{gen} 18-30 years',f'{gen} 30-50 years',f'{gen} above 50
years']]
        list1 = []
        dict1 = {}
        list2 = []
        dict_states = {}
        sum = 0
        for index,cols in df.iteritems():
            list1.append(index)
        list1.remove('STATE/UT')
        for index,values in enumerate(list1):
            main.p(f"{index+1}. {values}",style=style1)
            dict1[index+1] = values
        inp4 = int(input("Enter Your Choice :"))
        for index,row in df.iterrows():
            if row[0] in list2:
                pass
            else:
                list2.append(row[0])
```

```
        for index,values in enumerate(list2):
            main.p(f"{index+1}. {values}",style=style1)
            dict_states[index+1] = values
        inp5 = int(input("Enter The State :"))
        df1 = df.loc[:,['STATE/UT',dict1[inp4]]]
        for index,row in df1.iterrows():
            if row[0] == dict_states[inp5]:
                sum += row[1]
        main.p(f"Your Result :{sum} ",style=style2)

    def m_f3(gen):    #Male female choice 3
        df = crimes.loc[13:len(crimes.index)+1:14,['STATE/UT','YEAR',f'{gen} upto 10
years',f'{gen} 10-15 years',f'{gen} 15-18 years',f'{gen} 18-30 years',f'{gen} 30-50
years',f'{gen} above 50 years']]
        list1 = []
        dict1 = {}
        list2 = []
        dict_states = {}
        sum = 0
        for index,cols in df.iteritems():
            list1.append(index)
        list1.remove('STATE/UT')
        list1.remove('YEAR')
        for index,values in enumerate(list1):
            main.p(f"{index+1}. {values}",style=style1)
            dict1[index+1] = values
        inp4 = int(input("Enter Your Choice :"))
        for index,row in df.iterrows():
            if row[0] in list2:
                pass
            else:
                list2.append(row[0])
        for index,values in enumerate(list2):
            main.p(f"{index+1}. {values}",style=style1)
            dict_states[index+1] = values
        inp5 = int(input("Enter The State :"))
        inp6 = int(input("Enter The Year [2001 - 2012] :"))
        df1 = df.loc[:,['STATE/UT','YEAR',dict1[inp4]]]
        for index,row in df1.iterrows():
            if row[0] == dict_states[inp5] and row[1] == inp6:
```

```
                sum += row[2]
        print()
        console.print(f"Your Result : {sum}",style=style2)
        print()

    def murder_finder_age_group(start,gender):
        murder_sample = read_csv("murder.csv",usecols=['Upto 10 years','10-15 years','15-18
years','18-30 years','30-50 years','Above 50 years'])
        murder_sample = murder_sample.loc[start:len(murder_sample.index)+1:3]
        list1 = murder_sample.T.index
        dict1 ={}
        sum = 0
        for index,values in enumerate(list1):
            main.p(f"{index+1}. {values}",style=style1)
            dict1[index+1] = values
        inp3 = int(input("Enter Your Choice :"))
        murder_sample.index = range(0,len(murder_sample.index))
        for i in range(0,len(murder_sample.index)):
            sum += murder_sample[dict1[inp3]][i]
        main.p()
        main.p(f"Total Number of {gender} murders = {sum}",style=style2)
        main.p()

    def crime_1():
        df = crimes.loc[13:len(crimes.index)+1:14,['Grand Total']]
        df.index = range(1,len(df.index)+1)
        total = 0
        for i in range(len(df.index)):
            total += df['Grand Total'][i+1]
        console.print()
        console.print("Total number of Crimes in India =",total,style=style2)
        console.print()

    def crime_2():
        df = crimes.loc[13:len(crimes.index)+1:14,['STATE/UT','YEAR','Grand Total']]
        df.index = range(1,len(df.index)+1)
        df_states = crimes.loc[13:len(crimes.index)+1:167,['STATE/UT']]
        df_states.index = range(1,len(df_states.index)+1)
        state_names = []
        dict1 ={}
```

```
    for i in range(len(df_states.index)):
        state_names.append(df_states['STATE/UT'][i+1])
    for index,value in enumerate(state_names):
        console.print(f"{index+1}. {value}",style=style1)
        dict1[index+1] = value
    inp3 = int(input("Enter Your Choice :"))
    sum = 0
    for index,row in df.iterrows():
        if row[0] == dict1[inp3]:
            sum += row[2]
    console.print()
    console.print(f"Total number of crimes in {dict1[inp3]} = {sum}.",style=style2)
    console.print()

def crime_3():
    try:
        inp3 = int(input("Enter The Year (2001 to 2012):"))
    except:
        console.print("Enter The Valid Year")
        inp3 = int(input("Enter The Year (2001 to 2012):"))
    sum = 0
    for index,row in crimes.iterrows():
        if row[1] == inp3:
            sum += row[18]
    console.print()
    console.print(f"Total Number of Crimes in {inp3} = {sum}",style=style2)
    console.print()

def crime_4():
    try:
        inp3 = int(input("Enter The Year (2001 to 2012):"))
    except:
        console.print("Enter The Valid Year")
        inp3 = int(input("Enter The Year (2001 to 2012):"))
    df_states = crimes.loc[13:len(crimes.index)+1:167,['STATE/UT']]
    df_states.index = range(1,len(df_states.index)+1)
    state_names = []
    dict1 ={}
    for i in range(len(df_states.index)):
        state_names.append(df_states['STATE/UT'][i+1])
```

```
        for index,value in enumerate(state_names):
            console.print(f"{index+1}. {value}",style=style1)
            dict1[index+1] = value
        inp4 = int(input("Enter Your Choice :"))
        df = crimes.loc[13:len(crimes.index)+1:14,['STATE/UT','YEAR','Grand Total']]
        for index,row in df.iterrows():
            if row[0] == dict1[inp4] and row[1] == inp3:
                crime_number = row[2]
        console.print()
        console.print(f"Number of Crime cases in {dict1[inp4]} in {inp3} =
{crime_number}",style=style2)
        console.print()

    def crime_5():
        list1 = []
        dict1 = {}
        sum = 0
        for index,row in crimes.iterrows():
            if row[2] in list1:
                pass
            else:
                if row[2] == "Total" or row[2] == "For unlawful activity":
                    pass
                else:
                    list1.append(row[2])

        for index,value in enumerate(list1):
            console.print(f"{index+1}. {value}",style=style1)
            dict1[index+1] = value
        try:
            inp3 = int(input("Enter Your Choice :"))
        except:
            console.print("Your Choice should be in Integer!!")
            inp3 = int(input("Enter Your Choice :"))
        for index,row in crimes.iterrows():
            if row[2] == dict1[inp3]:
                sum += row[18]

        console.print(f"Total Number of Crimes = ",sum,style=style2)
```

```
    def crime_6():
        #Printing States
                    df_states = crimes.loc[13:len(crimes.index)+1:167,['STATE/UT']]
                    df_states.index = range(1,len(df_states.index)+1)
                    state_names = []
                    dict1 ={}
                    for i in range(len(df_states.index)):
                        state_names.append(df_states['STATE/UT'][i+1])
                    for index,value in enumerate(state_names):
                        console.print(f"{index+1}. {value}",style=style1)
                        dict1[index+1] = value
                    inp3 = int(input("Enter The place :"))
                    #Printing Crimes
                    list1 = []
                    dict2 = {}
                    sum = 0
                    for index,row in crimes.iterrows():
                        if row[2] in list1:
                            pass
                        else:
                            if row[2] == "Total" or row[2] == "For unlawful activity":
                                pass
                            else:
                                list1.append(row[2])
                    for index,value in enumerate(list1):
                        console.print(f"{index+1}. {value}",style=style1)
                        dict2[index+1] = value
                    inp4 = int(input("Enter The Kind :"))
                    for index,row in crimes.iterrows():
                        if row[0] == dict1[inp3] and row[2] == dict2[inp4]:
                            sum += row[18]
                    console.print()
                    console.print(f"Total Number of Crime {dict2[inp4]} in {dict1[inp3]}
=",sum,style=style2)
                    console.print()

    def crime_7():
        try:
            inp3 = int(input("Enter The Year (2001 to 2012):"))
        except:
```

```
            console.print("Enter The Valid Year")
            inp3 = int(input("Enter The Year (2001 to 2012):"))
        #Printing States
        df_states = crimes.loc[13:len(crimes.index)+1:167,['STATE/UT']]
        df_states.index = range(1,len(df_states.index)+1)
        state_names = []
        dict1 ={}
        for i in range(len(df_states.index)):
            state_names.append(df_states['STATE/UT'][i+1])
        for index,value in enumerate(state_names):
            console.print(f"{index+1}. {value}",style=style1)
            dict1[index+1] = value
        inp4 = int(input("Enter The place :"))
        #Printing Crimes
        list1 = []
        dict2 = {}
        sum = 0
        for index,row in crimes.iterrows():
            if row[2] in list1:
                pass
            else:
                if row[2] == "Total" or row[2] == "For unlawful activity":
                    pass
                else:
                    list1.append(row[2])
        for index,value in enumerate(list1):
            console.print(f"{index+1}. {value}",style=style1)
            dict2[index+1] = value
        inp5 = int(input("Enter The Kind :"))
        for index,row in crimes.iterrows():
            if row[0] == dict1[inp4] and row[2] == dict2[inp5] and row[1] == inp3:
                sum += row[18]
        console.print()
        console.print(f"Total Number of Crime {dict2[inp5]} at {dict1[inp4]} in {inp3}
=",sum,style=style2)
        console.print()

# Loader
def spinning_cursor():
   while True:
```

```
        for cursor in '|/-\\':
            yield cursor

# Loading Printer
def load(x):
    spinner = spinning_cursor()
    for _ in range(x):
        sys.stdout.write(next(spinner))
        sys.stdout.flush()
        time.sleep(0.1)
        sys.stdout.write('\b')
```

Printing initial choice and taking user input :

```
if __name__ == "__main__":
    #Printing Date
    console.print("Date -",datetime.date(datetime.now()),style=style2)
    console.print("Time -",datetime.time(datetime.now()),style=style2)
    console.print()

    #Printing Choice
    main.printer()
    try:
        inp1 = int(input("Enter Your Choice :"))
    except:
        console.print("You need to enter your choice in Integer form.")
        inp1 = int(input("Enter Your Choice :"))
```

```
guri@gurimanchester-lappy:~/Desktop/main$ python3 main.py
Date - 2022-01-09
Time - 19:28:34.138620

                    Talk is Cheap, Show me the Code -- Linus Torvalds
1. Analyse Different Crimes in India.
2. Analyse Murders.
3. Visualise Crimes
4. Visualise Murders
5. Entry Of Data To Database
6. Exit

Enter Your Choice :
```

If User’s Choose 1 to analyse crimes in India :

```
    if inp1 == 1:
```

```
while True:
    crimes = read_csv("crimes.csv")
    main.crime_printer()                # Crime analyser choice printer
    try:
        inp2 = int(input("Enter Your Choice :"))
    except:
        console.print("You need to enter your choice in Integer form.")
        inp2 = int(input("Enter Your Choice :"))

    # Analysis Starts Here
    if inp2 == 1:
        main.crime_1()

    elif inp2 == 2:
        main.crime_2()

    elif inp2 == 3:
        main.crime_3()

    elif inp2 == 4:
        main.crime_4()

    elif inp2 == 5:
        main.crime_5()

    elif inp2 == 6:
        main.crime_6()

    elif inp2 == 7:
        main.crime_7()

    elif inp2 == 8:
        main.printer_8_9()
        inp3 = int(input("Enter Your choice :"))

        if inp3 == 1:
            main.m_f1("Male")
        elif inp3 == 2:
            main.m_f2("Male")
        elif inp3 == 3:
            main.m_f3("Male")
        else:
            console.print("wrong choice!!")

    elif inp2 == 9:
        main.printer_8_9()
        inp3 = int(input("Enter Your Choice :"))

        if inp3 == 1:
```

```
            main.m_f1("Female")
        elif inp3 == 2:
            main.m_f2("Female")
        elif inp3 == 3:
            main.m_f3("Female")
        else:
            console.print("Terminating!!")
            load(25)
            exit()

    elif inp2 == 10:
        console.print("Please Wait\nTerminating")
        load(25)
        exit()

    else:
        console.print("Wrong Choice!!")
        break

    console.print("Do you want to continue? [y or n]")
    inp5 = input("Enter Your Choice :")

    if inp5 == ("y" or "Y"):
        continue
    else:
        console.print("Terminating!!")
        load(25)
        Break
```

```
Enter Your Choice :1
What do you want to do with data?
1. Total Number of crimes in India from 2001 to 2012.
2. Total Number of crimes in particular State.
3. Total Number of crimes in particular year.
4. Total Number of crimes in a state in particular year.
5. Particular Crime in the given year.
6. Particular Crime in the given State.
7. Particular Crime in the given State in given Year.
8. Analyse Crimes on Male(with Age group).
9. Analyse Crimes on Female(with age group)
10. Exit
Enter Your Choice :
```

User Choice is 1 in crime analyser :

```
Enter Your Choice :1
What do you want to do with data?
1. Total Number of crimes in India from 2001 to 2012.
2. Total Number of crimes in particular State.
3. Total Number of crimes in particular year.
4. Total Number of crimes in a state in particular year.
5. Particular Crime in the given year.
6. Particular Crime in the given State.
7. Particular Crime in the given State in given Year.
8. Analyse Crimes on Male(with Age group).
9. Analyse Crimes on Female(with age group)
10. Exit
Enter Your Choice :1

Total number of Crimes in India = 361459
```

User Choice is 2 in Crime Analyser :

When a user wants to analyse crime - The crime analyser has 9 different options to analyse crimes in India, all in different manners.

- ***Users can see total number of crimes in india from 2001 to 2012.***
- ***He/She can see the total number of crimes in a particular state.***
- ***He/She can see the total numbers of crimes in a given Year.***
- ***He/She can see the total number of crimes in a particular state in the given year.***
- ***AND MANY MORE :)***

IN THIS GIVEN DOCUMENTATION, THERE ARE ONLY 2 OPTIONS SHOWN.

```
Do you want to continue?
Enter Your Choice :y
What do you want to do with data?
1. Total Number of crimes in India from 2001 to 2012.
2. Total Number of crimes in particular State.
3. Total Number of crimes in particular year.
4. Total Number of crimes in a state in particular year.
5. Particular Crime in the given year.
6. Particular Crime in the given State.
7. Particular Crime in the given State in given Year.
8. Analyse Crimes on Male(with Age group).
9. Analyse Crimes on Female(with age group)
10. Exit
Enter Your Choice :2
1. Andhra Pradesh
2. Arunachal Pradesh
3. Assam
4. Bihar
5. Chhattisgarh
6. Goa
7. Gujarat
8. Haryana
9. Himachal Pradesh
10. Jammu & Kashmir
11. Jharkhand
12. Karnataka
13. Kerala
14. Madhya Pradesh
15. Madhya Pradesh
16. Maharashtra
17. Manipur
18. Meghalaya
19. Mizoram
20. Nagaland
21. Odisha
22. Punjab
23. Rajasthan
24. Sikkim
25. Tamil Nadu
26. Tripura
27. Uttar Pradesh
28. Uttarakhand
29. West Bengal
30. A&N Islands
31. Chandigarh
32. D&N Haveli
33. Daman & Diu
34. Delhi UT
35. Lakshadweep
36. Puducherry
Enter Your Choice :1

Total number of crimes in Andhra Pradesh = 21326.
```

If User Choose 2 to Analyse Murders in india :

```
elif inp1 == 2:
    murder = read_csv("murder.csv")
    while True:
      main.murder_printer()      # Murder Analyser Choice Printer
      try:
        inp2 = int(input("Enter Your Choice :"))
      except:
        console.print("You need to enter your choice in Integer form.")
        inp2 = int(input("Enter Your Choice :"))

      if inp2 == 1:
        df = murder.loc[2:len(murder.index)+1:3,["Total"]]
        df.index = range(1,len(df.index)+1,1)
        sum = 0
        for index,row in df.iterrows():
          sum += row[0]
        console.print("Total Number of Murders in 2013 =",sum)

      elif inp2 == 2:
        list1 = []
        dict1 = {}
        sum = 0
        for index,row in murder.iterrows():
          if row[0] in list1:
            pass
          else:
            list1.append(row[0])
        for index,value in enumerate(list1):
          console.print(f"{index + 1}. {value}")
          dict1[index+1] = value
        inp3 = int(input("Enter You Choice :"))
        for index,row in murder.iterrows():
          if row[0] == dict1[inp3] and index in range(2,len(murder.index)+1,3):
            sum += row[9]
        console.print(f"Total Number of Murders in {dict1[inp3]} =",sum)

      elif inp2 == 3:
        main.murder_finder_age_group(1,"Female")

      elif inp2 == 4:
        main.murder_finder_age_group(2,"Male")
```

```
elif inp2 == 5:
   main.murder_m_f("female")

elif inp2 == 6:
   main.murder_m_f("male")

elif inp2 == 7:
   console.print("Please Wait while Terminating")
   load(25)
   exit()
else:
   console.print("Wrong Choice \nTry Again")
   continue

console.print("Do You want to continue? [y or n] :")
inp3 = input("Enter :")
if inp3 == ("y" or "Y"):
   continue
else:
   console.print("Exiting The Analyser!!")
   load(30)
   break
```

```
Enter Your Choice :2
What do you want to do with data?

1. Total Number of Murders in India from 2013
2. Total Number of Murders in particular State.
3. Murder of a Female(with Age group).
4. Murder of a Male(with age group)
5. Murder of a Female(with Age group) in specific state.
6. Murder of a male(with Age group) in specific state.
7. Exit
Enter Your Choice :
```

If User choose 1 in Murder Analyser :

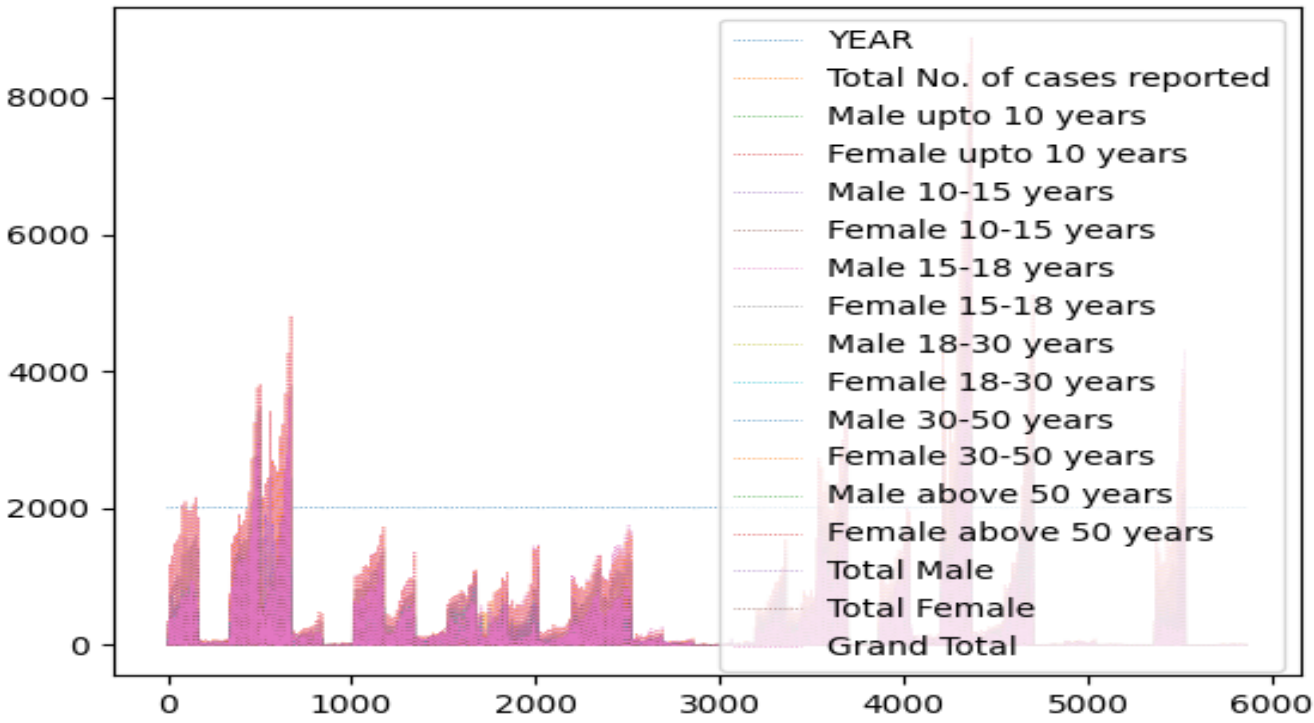
```
Enter Your Choice :2
What do you want to do with data?

1. Total Number of Murders in India from 2013
2. Total Number of Murders in particular State.
3. Murder of a Female(with Age group).
4. Murder of a Male(with age group)
5. Murder of a Female(with Age group) in specific state.
6. Murder of a male(with Age group) in specific state.
7. Exit
Enter Your Choice :1
Total Number of Murders in 2013 = 33901
Do You want to continue?  :
Enter :
```

If User choose 2 in Murder Analyser :

```
What do you want to do with data?

1. Total Number of Murders in India from 2013
2. Total Number of Murders in particular State.
3. Murder of a Female(with Age group).
4. Murder of a Male(with age group)
5. Murder of a Female(with Age group) in specific state.
6. Murder of a male(with Age group) in specific state.
7. Exit
Enter Your Choice :2
1. Andhra Pradesh
2. Arunachal Pradesh
3. Assam
4. Bihar
5. Chhattisgarh
6. Goa
7. Gujarat
8. Haryana
9. Himachal Pradesh
10. Jammu & Kashmir
11. Jharkhand
12. Karnataka
13. Kerala
14. Madhya Pradesh
15. Maharashtra
16. Manipur
17. Meghalaya
18. Mizoram
19. Nagaland
20. Odisha
21. Punjab
22. Rajasthan
23. Sikkim
24. Tamil Nadu
25. Tripura
26. Uttar Pradesh
27. Uttarakhand
28. West Bengal
29. A&N Islands
30. Chandigarh
31. D&N Haveli
32. Daman & Diu
33. Delhi UT
34. Lakshadweep
35. Puducherry
Enter You Choice :2
Total Number of Murders in Arunachal Pradesh = 69
Do You want to continue?  :
Enter :
```

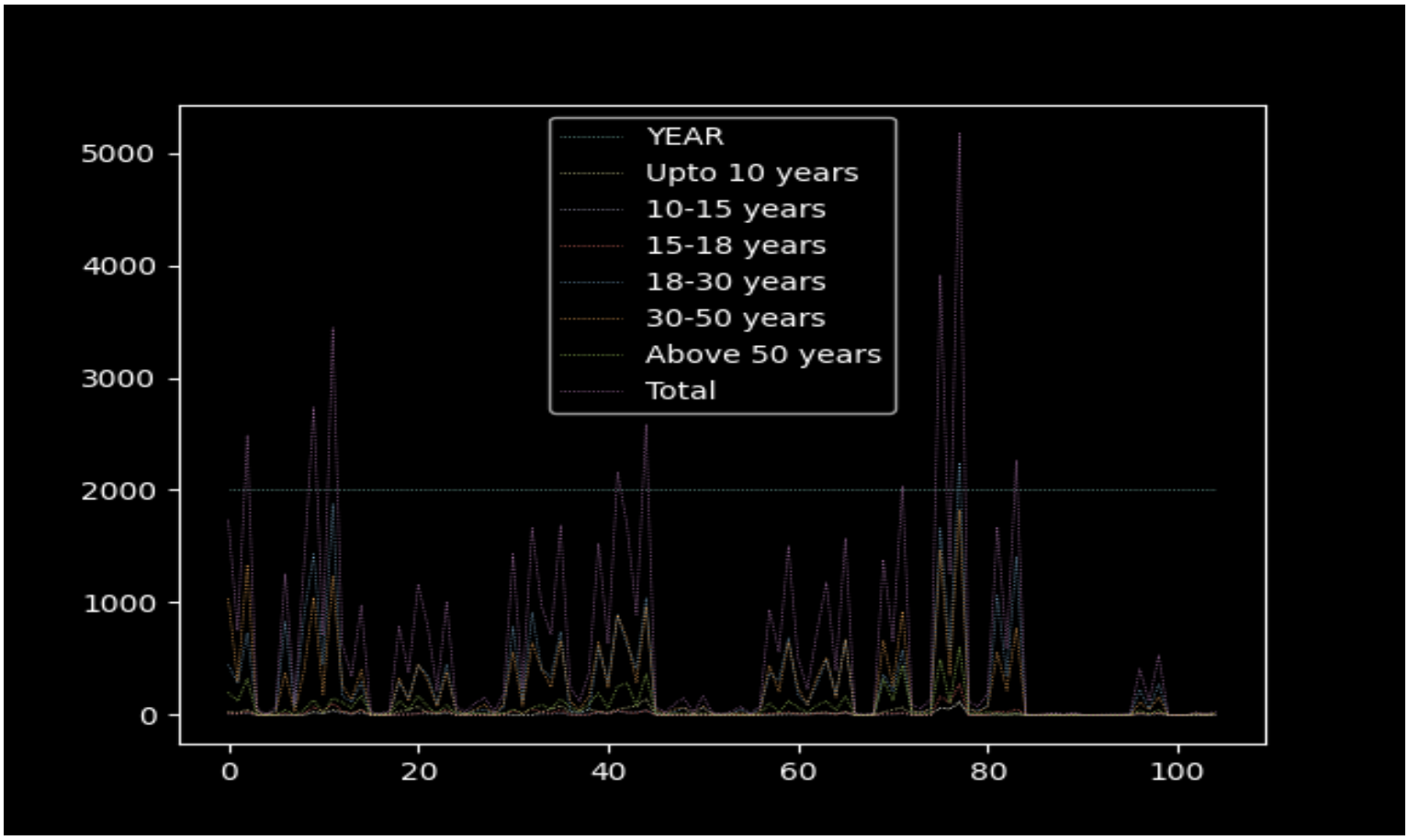
If User Choose 3 to Visualise Crimes in india :

```
elif inp1 == 3:
    crimes = read_csv("crimes.csv")
    main.p("1. Line Graph\n2. Bar Graph",style1)
    inp2 = int(input("Enter Your Choice :"))

    if inp2 == 1:
        # plt.style.use('dark_background')
        crimes.plot(kind="line",ls=':',lw=0.5)
        plt.show()
    elif inp2 == 2:
        crimes = read_csv("crimes.csv",usecols=['STATE/UT','Grand Total'])
        # plt.style.use('dark_background')
        crimes.plot(kind="bar")
        plt.show()
```



If User Choose 4 to Visualise Murders in india :

```
elif inp1 == 4:
    murders = read_csv("murder.csv")
    main.p("1. Line Graph\n2. Bar Graph",style1)
    inp2 = int(input("Enter Your Choice :"))

    if inp2 == 1:
        # plt.style.use('dark_background')
        murders.plot(kind="line",ls=':',lw=0.5)
        plt.show()
    elif inp2 == 2:
        murders = read_csv("murder.csv",usecols=['STATE/UT','Total'])
        plt.style.use('dark_background')
        murders.plot(kind="bar")
        plt.show()
```



If User Choose 5 to Save Data of Csv files in Mysql DataBase :

```
   elif inp1 == 5:
       main.p("In order to Save Data into Mysql database you need to have a database
first.\n",style)
       main.p("1.Create Database.\n2.Existing Database",style)
       inp100 = int(input("Enter Your Choice :"))

       inp1 = input("Enter The Name of the host :")
       inp2 = input("Enter The Name of the user :")
       inp4 = input("Enter The Password :")

       if inp100 == 1:
           conn = connector.connect(host=inp1,user=inp2,passwd=inp4)
           cur = conn.cursor()
           inp3 = input("Enter The Name of the database you want to create :")
           query = f"create database {inp3}"
           try:
               cur.execute(query)
               main.p("Database Created.",style="green")
           except:
               main.p("Database can't be created for some reason....",style1)
               main.p("Wrong Choice\nTerminating \nPlease Wait",style)
               load(20)
               exit()
       elif inp100 == 2:
           pass

       if inp100 == 1:
           pass
       else:
           inp3 = input("Enter The Name of the Database already Created :")

       # Connecting Databse
       conn = connector.connect(host=inp1,user=inp2,passwd=inp4,db=inp3)
       cur = conn.cursor()
```

```
        if conn:
            console.print("\nDatabase successfully connected\n",style="green")
        else:
            console.print("Not Connected \nTerminating...\n",style="red")

        # LOGIC Starts
        query1 = "create table crimes(STATE_UT varchar(40),YEAR int,Pupose
varchar(60),Total_No_of_cases_reported int,Male_upto_10_years int,Female_upto_10_years
int,Male_10_15_years int,Female_10_15_years int,Male_15_18_years int,Female_15_18_years
int,Male_18_30_years int,Female_18_30_years int,Male_30_50_years int,Female_30_50_years
int,Male_above_50_years int,Female_above_50_years int,Total_Male int,Total_Female
int,Grand_Total int);"

        query2 = "create table murder(STATE_UT varchar(40),YEAR int,GENDER
varchar(20),Upto_10_years int,10_15_years int,15_18_years int,18_30_years int,30_50_years
int,Above_50_years int,Total int)"

        try:
            cur.execute(query1)
        except:
            main.p("Table Crime can't be created or It has been already created.....",style)

        try:
            cur.execute(query2)
        except:
            main.p("Table Murder can't be created or It has been already created.....",style)

        crimes = read_csv('crimes.csv')
        murders = read_csv('murder.csv')

        print("\n1. Insert Data of crimes in INDIA.\n2. Insert Data of murders in INDIA.\n")
        inp200 = int(input("Enter Your Choice :"))
        main.p("THIS WILL TAKE SOME TIME\nTAKE REST...",style2)

        if inp200 == 1:
            for row in crimes.iterrows():
                query = f"insert into crimes
values('{row[1][0]}',{row[1][1]},'{row[1][2]}',{row[1][3]},{row[1][4]},{row[1][5]},{row[1][6
]},{row[1][7]},{row[1][8]},{row[1][9]},{row[1][10]},{row[1][11]},{row[1][12]},{row[1][13]},{
row[1][14]},{row[1][15]},{row[1][16]},{row[1][17]},{row[1][18]});"
```

```
                try:
                    cur.execute(query)
                    conn.commit()
                except:
                    main.p("Values can't be Inserted\nTry Again Later...",style)
                    load(30)
                    exit()
        elif inp200 == 2:
            for row in murders.iterrows():
                query = f"insert into murder
values('{row[1][0]}',{row[1][1]},'{row[1][2]}',{row[1][3]},{row[1][4]},{row[1][5]},{row[1][6
]},{row[1][7]},{row[1][8]},{row[1][9]});"
                try:
                    cur.execute(query)
                    conn.commit()
                except:
                    main.p("Values can't be Inserted\nTry Again Later...",style)
                    load(30)
                    exit()
        else:
            main.p("WRONG CHOICE\nTERMINATING",style)
            load(25)
            exit()
```