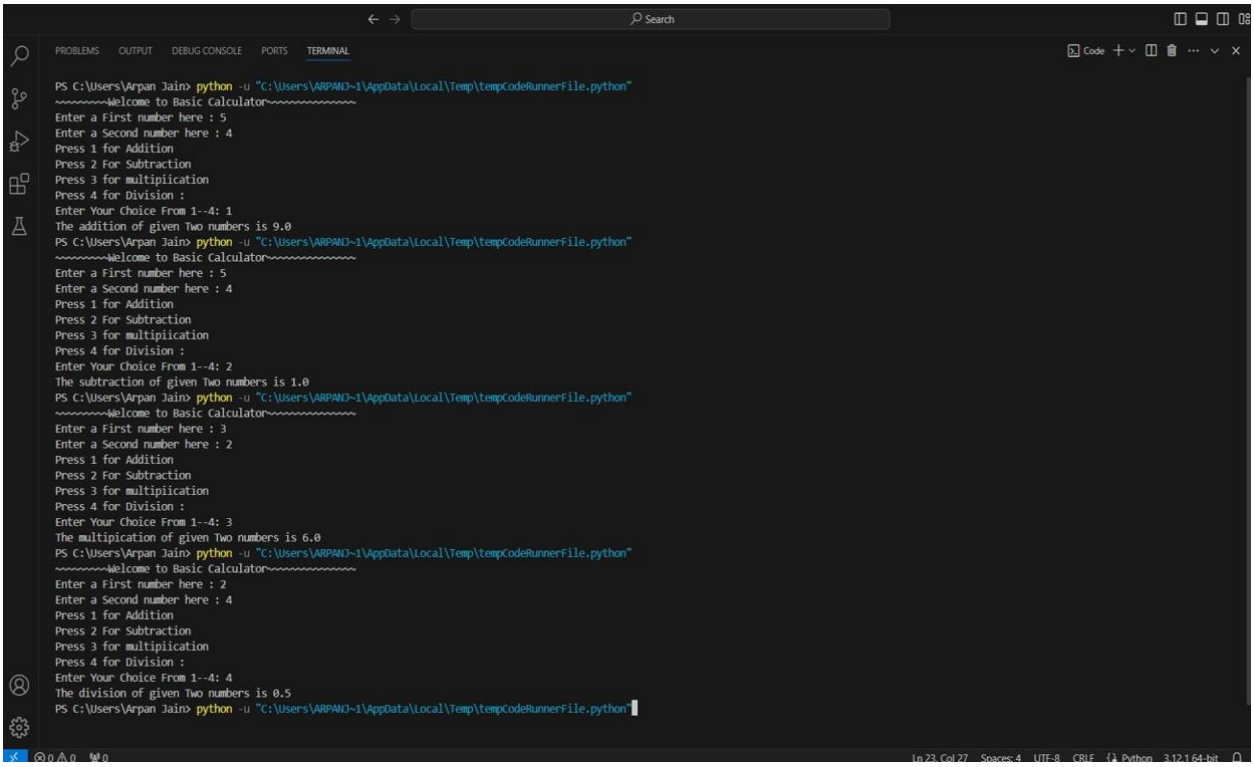
University Roll Number =>

2315000418

01.Basic Calculator

```
print("~~~~~~~~~~Welcome to Basic Calculator~~~~~~~~~~~~~~~~")

num1 = float(input("Enter a First number here : "))
num2 = float(input("Enter a Second number here : "))

print("Press 1 for Addition\nPress 2 For Subtraction\nPress 3 for
multipiication\nPress 4 for Division :")

ch = int(input("Enter Your Choice From 1--4: "))

if ch == 1 :
    print("The addition of given Two numbers is",num1+num2)

elif ch == 2:
    print("The subtraction of given Two numbers is",num1-num2)

elif ch == 3:
    print("The multipication of given Two numbers is",num1*num2)

elif ch == 4:
    print("The division of given Two numbers is",num1/num2)

else:
    print("invalid Input")
```

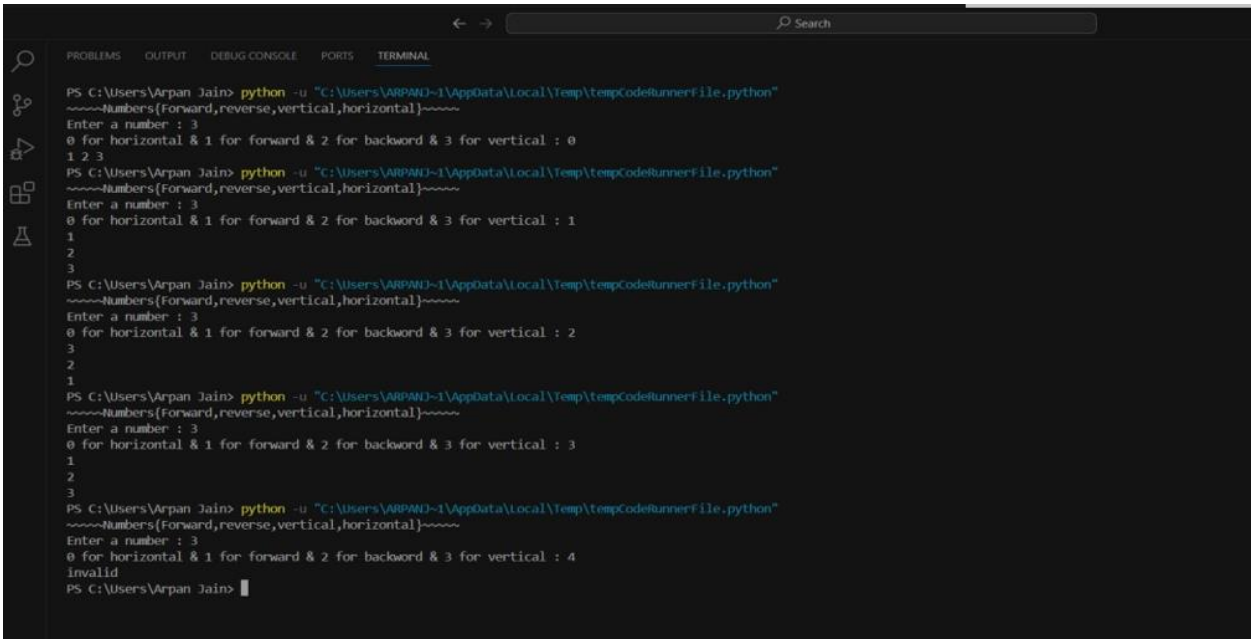
Output=>



02.Number System

```
print("~~~~~Numbers{Forward,reverse,vertical,horizontal}~~~~~")
a = int(input("Enter a number : "))
choice = int (input("0 for horizontal & 1 for forward & 2 for backword & 3 for
vertical : "))

if choice == 1:                         #forward
    for i in range (1,a+1,1):
        print(i)
elif choice == 0:
    for j in range (1,a+1,1):           #horizontal
        print(j,end=' ')
elif choice == 2:
    for k in range (a,0,-1):            #backward
        print(k)
elif choice == 3:
    for l in range (1,a+1,1):           #vertical
        print(l)
else:
    print("invalid")
```

Output=>

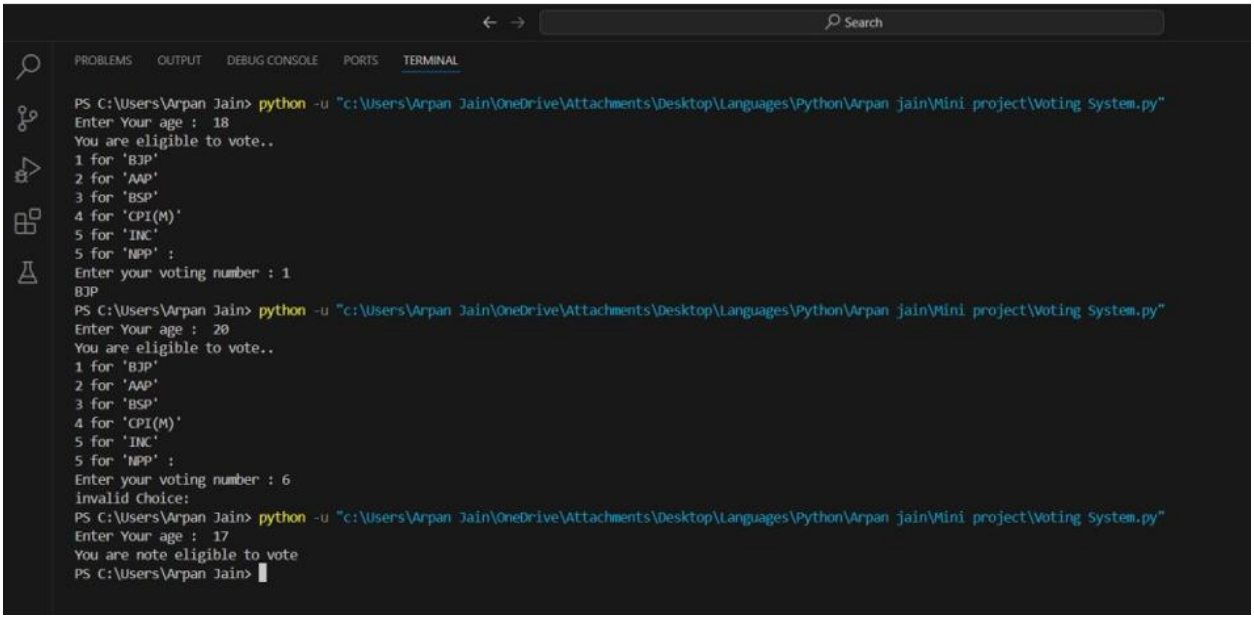


03.Voting System

```
print("~~~~Welcome To Vote~~~~~")

age = int(input("Enter Your age :  "))
if age >=18:
    print("You are eligible to vote..")
    print("1 for 'BJP'\n2 for 'AAP'\n3 for 'BSP'\n4 for 'CPI(M)'\n5 for 'INC'\n5
for 'NPP' : ")

    choice = int(input("Enter your voting number : "))
    if choice == 1:
        print("Your Vote For BJP")
    elif choice == 2:
        print("Your Vote For AAP")
    elif choice == 3:
        print("Your Vote For BSP")
    elif choice == 4:
        print("Your Vote For INC")
    elif choice == 5:
        print("Your Vote For NPP")
    else:
```

```
        print("invalid Choice: ")

else:
    print("You are note eligible to vote")
```

Output=>

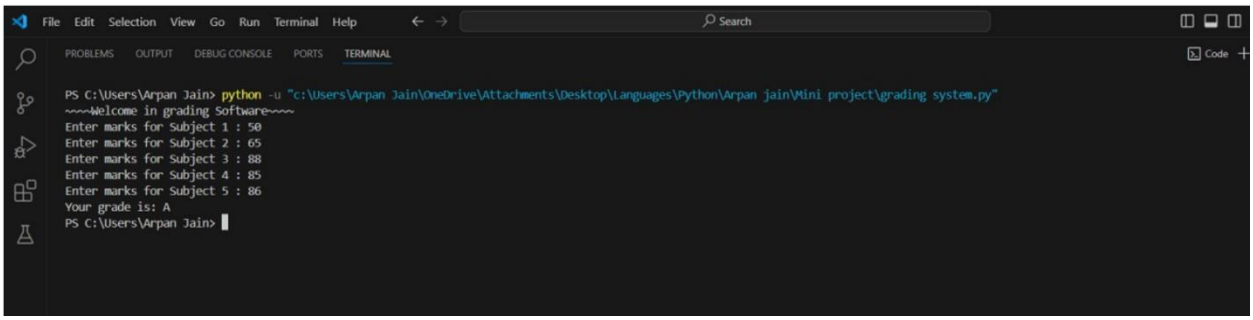


04.Grading System

```
print("~~~~Welcome in grading Software~~~~")

s1 = float(input("Enter marks for Subject 1 : "))
s2 = float(input("Enter marks for Subject 2 : "))
s3 = float(input("Enter marks for Subject 3 : "))
s4 = float(input("Enter marks for Subject 4 : "))
s5 = float(input("Enter marks for Subject 5 : "))

t_m = s1 + s2 + s3 + s4 + s5
average_marks = t_m / 5


if average_marks >= 90:
    grade = "A++"
elif average_marks >= 80:
    grade = "A+"
elif average_marks >= 70:
```

```
    grade = "A"
elif average_marks >= 60:
    grade = "B+"
elif average_marks >= 50:
    grade = "B"
elif average_marks >= 40:
    grade = "C"
else:
    grade = "F"

print("Your grade is:", grade)
```

Output=>

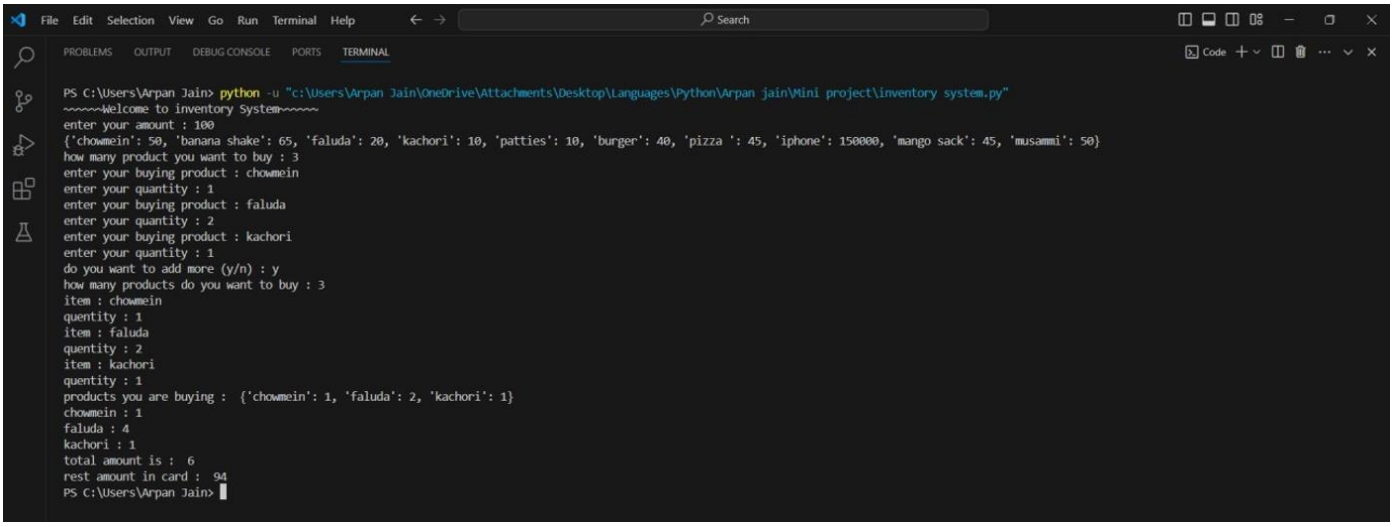


05.Inventory System

```
print("~~~~~~Welcome to inventory System~~~~~~")

menu = {"chowmein":50,
     "banana shake":65,
     'faluda':20,
     "kachori":10,
     "patties":10,
     "burger":40,
     "pizza ":45,
     "iphone":150000,
     "mango sack":45,
     "musammi":50}

amount = int(input("enter your amount : "))

print(menu)
buying_products = int(input("how many product you want to buy : "))
```

```
selected_products = {}
for i in range(1,buying_products+1):
     item = input("enter your buying product : ").lower().strip()
     item_qun = int(input("enter your quantity : "))
     if item not in menu.keys():
          print("this item is not available ")
          print("please place the  order from the above products ")
          for j in range(i,buying_products+1):
               item = input("enter your buying product : ").lower().strip()
               item_qun = int(input("enter your quantity : "))

     else:
          selected_products[item] = item_qun

more = input("do you want to add more (y/n) : ").lower()

if more == "y":
     buying_p = int(input("how many products do you want to buy : "))
     for items in range(buying_p):
          item = input("item : ")
          item_qun = int(input("quentity : "))
          selected_products[item] = item_qun



sum = 0
print("products you are buying : ",selected_products)
for k1,v1 in selected_products.items():
     total = 0
     total = total + selected_products[k1]*v1
     print(k1,":",total)
     sum = sum + selected_products[k1]*v1
print("total amount is : ",sum)
print('rest amount in card : ',amount - sum)
```

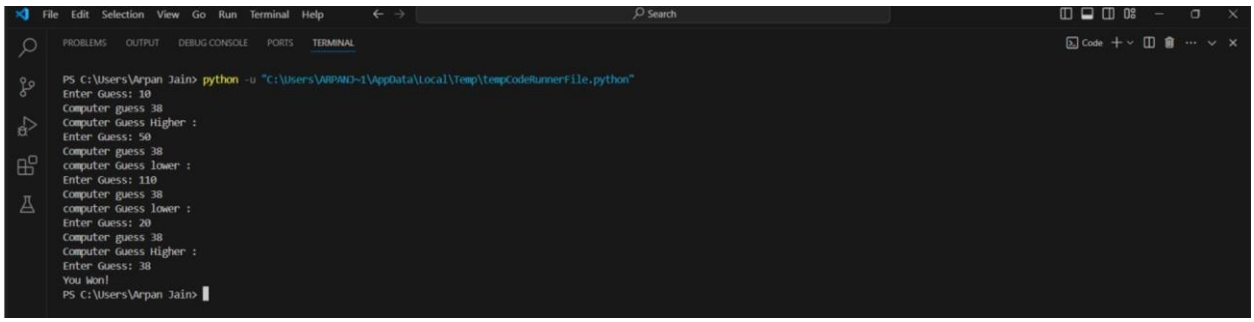
Output=>



06.Number Guessing Game

```
print("~~~~~WElcome to the number guessing game~~~~~")

import random

number = random.randint(1,100)
guess = 0
while guess != number:
    guess = int(input("Enter Guess: "))

    if guess<number:
        print("Computer guess",number)
        print("Computer Guess Higher :")
    elif guess > number:
        print("Computer guess",number)
        print("computer Guess lower :")
    else:
        print("You Won!")
```

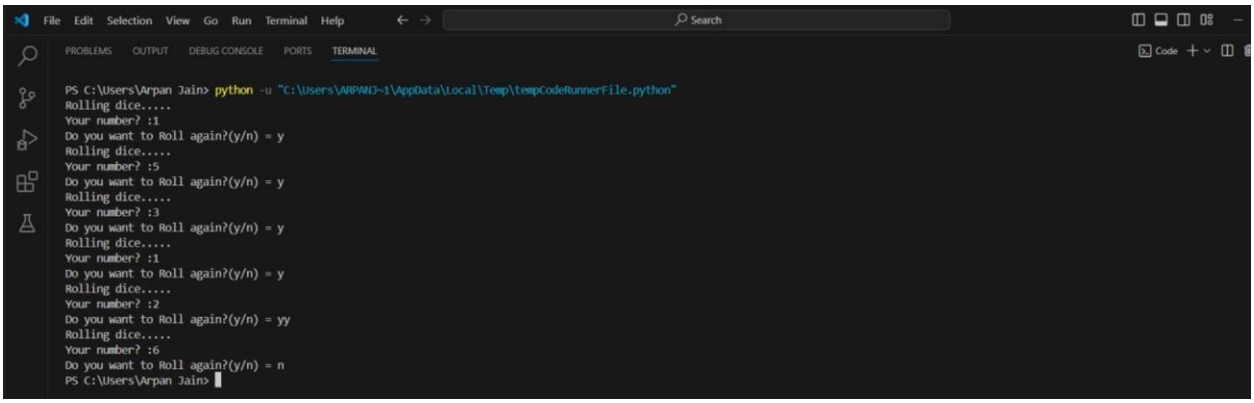
Output=>



07.Roll The Dice Game

```python
print("~~~~~Welcome Roll the dice game~~~~~~~~")

import random

def rolldice(min, max):
    while True:
        print("Rolling dice.....")
        number = random.randint(min, max)
        print(f"Your number? :{number}")
        choice = input('Do you want to Roll again?(y/n) = ')
        if choice.lower() == 'n':
            break

rolldice(1,6)
```

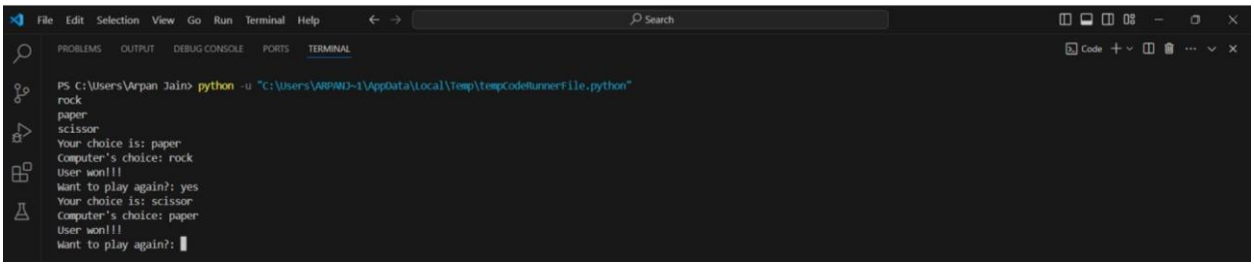
Output=>



08.Rock Paper Scissor Game

```
print("~~~~~Welcome to the rock paper scissor game~~~~~")

import random
choices = ['rock', 'paper', 'scissor']
print(*choices, sep="\n")

def game():
    computer = random.choice(choices)
    user = input('Your choice is: ').lower()

    if user not in choices:
        while True:
            print('Invalid input')
            user = input('Enter a valid choice: ')
            if user in choices:
                print('its valid')
                break
            else:
                continue
    print(f'Computer\'s choice: {computer}')


    if computer == user:
        print("Draw")
    elif computer == "rock" and user == "paper":
        print("User won!!!")
    elif computer == "scissor" and user == "paper":
        print("Computer won!!!")
    elif computer == "rock" and user == "scissor":
        print("Computer won!!!")
    elif computer == "scissor" and user == "rock":
        print("User won!!!")
    elif computer == "paper" and user == "rock":
        print("Computer won!!!")
    elif computer == "paper" and user == "scissor":
        print("User won!!!")
while True:
    game()
    more = input('Want to play again?: ')
    if more == "n":
        print("Thanks to play the game")
        break
```

Output=>



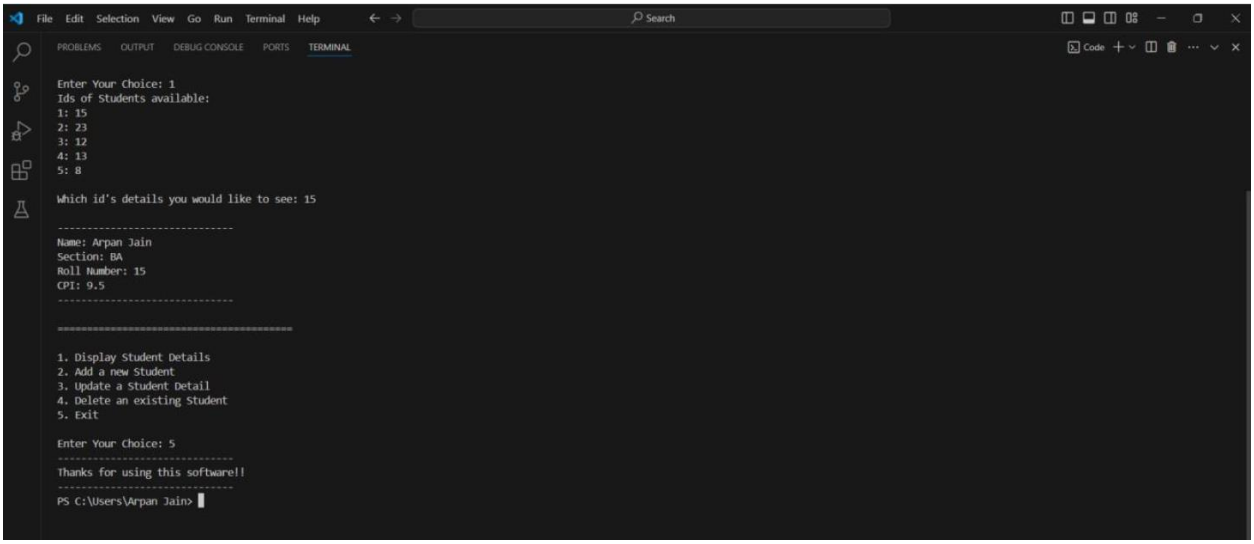
09.Student Management System

```
print("~~~~Student Management System~~~~")


def readMode():
    myFile = open("C:\\Users\\Arpan
Jain\\OneDrive\\Attachments\\Desktop\\Languages\\Python\\Arpan jain\\Mini
project\\system.txt", "r")
    dict = eval(myFile.read())
    myFile.close()
    return dict

def writeMode(data):
    myFile = open("C:\\Users\\Arpan
Jain\\OneDrive\\Attachments\\Desktop\\Languages\\Python\\Arpan jain\\Mini
project\\system.txt", "w")

    myFile.write(str(data))

    myFile.close()

def displayStudent():
    print('Ids of Students available:')
    for index, ids in enumerate(data):
        print(f'{index+1}: {ids}')

    id = int(input("\nWhich id's details you would like to see: "))

    if id not in data:
        print('This Student ID does not Exist!!')
    else:
```

```
        student = data.get(id)
        print(f'\n{'-' * 30}')
        print(f'Name: {student[0]}')
        print(f'Section: {student[1]}')
        print(f'Roll Number: {id}')
        print(f'CPI: {student[2]}')
        print(f'{'-' * 30}')

def addStudent():
    id = int(input('\nEnter Student Id(Roll no.): '))
    if id in data:
        print('This ID already exists!! Cannot add new Student with same ID.')
    else:
        detail = input('Enter your details(Ex.Name, Section, CPI): ').split(',')
        data[id] = detail
        print('New Student is Added Successfully!!')

def updateStudent():
    id = int(input('\nEnter your Student Id you want to update: '))
    if id not in data:
        print('This Student ID does not Exist!!')
    else:
        detail = input('Enter your details(Ex.Name, Section, CPI): ').split(',')
        data[id] = detail
        print('Existing Student is Updated Successfully!!')

def deleteStudent():
    id = int(input('\nEnter which Student Id you want to delete: '))
    if id not in data:
        print('This Student ID does not exist!!')
    else:
        del data[id]
        print('Student is Deleted Successfully!!')

data = readMode()

while True:
    print(f'\n{'='*40}\n')

    print(
      '1. Display Student Details',
      '2. Add a new Student',
      '3. Update a Student Detail',
      '4. Delete an existing Student',
      '5. Exit', sep='\n'
```

```
      )

    user_choice = int(input('\nEnter Your Choice: '))

    if user_choice == 1:
        displayStudent()
    elif user_choice == 2:
        addStudent()
    elif user_choice == 3:
        updateStudent()
    elif user_choice == 4:
        deleteStudent()
    elif user_choice == 5:
        print(f'{'-' * 30}')
        print('Thanks for using this software!!')
        print(f'{'-' * 30}')
        break
    else:
        print('Invalid Choice!!')

writeMode(data)
```

Output=>



====THE END====