**Full Stack Web Development using Python**

**Assignment – 7 : Match Case**

1. Write a python script to display the number of days in a given month number.

**Program:**

month=int(input("Enter month number "))

match month:

case month if month in (1,3,5,7,8,10,12):

print("31 days")

case month if month in (4,6,9,11):

print("30 days")

case 2:

print("28 or 29 days")

case \_:

print("invalid input")

1. Write a menu driven program to perform following operations - Addition, Subtraction, Multiplication, Division

**Program:**

print("1. Addition","2. Subtraction","3. Multiplication","4. Division",sep='\n')

choice=int(input("Enter your choice "))

x,y=input("Enter two numbers (use space to input numbers)").split()

match choice:

case 1:

print("Sum is ",int(x)+int(y))

case 2:

print("Difference is ",int(x)-int(y))

case 3:

print("Multiplication is ",int(x)\*int(y))

case 4:

print("Division is ",int(x)/int(y))

case \_:

print("invalid input")

1. Write a menu driven program with the following options:

a. Check whether a given set of three numbers are lengths of an isosceles triangle or not

b. Check whether a given set of three numbers are lengths of sides of a right angled triangle or not

c. Check whether a given set of three numbers are equilateral triangle or not

d. Exit.

**Program:**

print("1. Check whether a given set of three numbers are lengths of an isosceles triangle or not" )

print("2. Check whether a given set of three numbers are lengths of sides of a right angled triangle or not ")

print("3. Check whether a given set of three numbers are equilateral triangle or not ")

print("4. exit")

choice=int(input("Enter your choice "))

print("Enter length of three sides of triangle (use enter to input numbers)")

x,y,z=int(input()),int(input()),int(input())

match choice:

case 1:

print("isosceles triangle" if x==y!=z or x==z!=y or y==z!=x else "not isosceles triangle")

case 2:

print("Right angled triangle" if (x\*\*2+y\*\*2==z\*\*2 or x\*\*2+z\*\*2==y\*\*2 or z\*\*2+y\*\*2==x\*\*2) else "not right angled triangle")

case 3:

print("Equilateral triangle" if x==y==z else "not equilateral triangle")

case 4:

exit()

case \_:

print("invalid choice")

1. Write a program which takes user’s age and display the category of person. Age below 10 years- Kid, Age below 20 - Teen, Age below 40 - young, Age below 60 - Experienced, Age above or equal 60 - Senior Citizen.

**Program:**

age=int(input("Enter your age"))

match age:

case age if age<10:

print("Kid")

case age if age>=10 and age<20:

print("Teen")

case age if age>=20 and age<40:

print("young")

case age if age>=40 and age<60:

print("Experienced")

case age if age>=60:

print("Senior citizen")

1. Write a program which takes a number from user. Print Saurabh Shukla if the number is even, print Prateek Jain if the number is negative odd number and print Aditya Choudhary if number is positive odd number.

**Program:**

number=int(input("Enter a number"))

match number:

case number if number%2==0:

print("Saurabh Shukla")

case number if number<0 and number%2:

print("Prateek Jain")

case number if number>0 and number%2:

print("Aditya Choudhary")

1. Write a python program to check whether a given string is a multiword string or single word string using match case statement

**Program:**

s=input("Enter a string")

s=s.strip()

match s:

case s if ' ' in s:

print("Multiword String")

case s if ' ' not in s:

print("Single word String")

1. Write a python program to check whether a given number is positive, negative or zero using match case statement

**Program :**

num=int(input("Enter a number"))

match num:

case num if num>0:

print("Positive Number")

case num if num<0:

print("Negative number")

case num if num==0:

print("Zero")

1. Write a python script to check whether two given strings are identical, first string comes before the second in dictionary order or first string comes after the second string in dictionary order using match case statement

**Program :**

s1=input("Enter first string")

s2=input("Enter second string")

match(s1,s2):

case (s1,s2) if s1==s2:

print("identical strings")

case (s1,s2) if s1>s2:

print("{} comes after {}".format(s1,s2))

case (s1,s2) if s1<s2:

print("{} comes after {}".format(s2,s1))

1. Write a python script to check whether a given year is

a. Non century leap year b. Century leap year

c. Non century non leap year d. Century non leap year

**Program :**

year=int(input("Enter year "))

match year:

case year if year%100!=0 and year%4==0:

print("Non Century leap year")

case year if year%400==0 and year%4==0 and year%100==0:

print("Century leap year")

case year if year%400!=0 and year%100!=0 and year%4!=0:

print("Non Century non leap year")

case year if year%100==0 and year%4==0:

print("Century non leap year")

1. Write a program to display day name on the basis of user’s liking of a colour. Ask user for his favorite colour. User can answer in a sentence like “I like red colour”. Assuming all colour name entered by user is in lowercase. Use match case to display day name associated with the colour.

a. Yellow - Monday b. Blue - Tuesday c. Orange - Wednesday d. White - Thursday e. Black - Friday f. Red - Saturday g. All other colours – Sunday

**Program :**

s=input("What is your favourite colour ?")

l1=["yellow","blue","orange","white","black","red"]

for colour in l1:

if colour in s:

c=colour

break

else:

c="other"

match c:

case "yellow":

print("Monday")

case "blue":

print("Tuesday")

case "orange":

print("Wednesday")

case "white":

print("Thrusday")

case "black":

print("Friday")

case "red":

print("Saturday")

case "other":

print("Sunday")