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

```
n=int(input("Enter no of month: "))
if(n==1 or n==3 or n==5 or n==7 or n==8 or
n==10 or n==12):
    print(31, "days in ", n, "month")
elif(n==4 or n==6 or n==9 or n==11):
    print(30, "days in ", n, "month")
elif(n==2):
    print(28, "days in ", n, "month")
```

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

```
x=(input("Enter symbol: "))
match x:
    case "+":
        print("Addition perform")
    case "-":
        print("Substraction perform")
    case "*":
        print("Multiplication perform")
    case "/":
        print("Divisio perform")
```

3. 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.

```
a=int(input("Enter first side: "))
b=int(input("Enter second side: "))
c=int(input("Enter third side: "))
if(a==b or b==c or c==a):
    print("isosceles triangle")
elif (a==b==c):
    print("equilateral triangle ")
elif(c*c==a*a+b*b):
    print("right angle triangle")
else:
    print("Exit")
```

4. 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.

```
n=int(input("Enter age: "))
if(n<0):
    print("Kid")
elif(n>10 and n<20):
    print("Teen")
elif(n>20 and n<40):
    print("Young")
elif(n>40 and n<60):
    print("Experienced")
```

```
elif(n>=60):
    print("Senior citizen")
```

5. 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.

```
n=int(input("Enter any number: "))
if (n%2==0):
    print("Saurabh Shukla")
elif (n<0 and n%2!=0):
    print("Prateek Jain")
if(n>=0 and n%2!=0):
    print("Aditya Choudhary")
```

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

```
import re

def check_string_type(input_string):
    if match := re.match(r'^\S+$',
input_string):
        return "Single word string"
    elif match :=
re.match(r'^\S+(\s\S+)+$', input_string):
        return "Multiword string"
    else:
```

```
        return "Invalid input or empty
string"

# Test cases
test_strings = [
    "hello",                # Single word
string
    "hello world",          # Multiword
string
    "  spaces_only  ",      # Multiword
string
    "single_word_with_",    # Single word
string
    "",                     # Invalid input
or empty string
]

for test_string in test_strings:
    result = check_string_type(test_string)
    print(f"'{test_string}' is a {result}")
```

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

```
number= eval(input("Enter any number: "))
match number:
```

```
        case _ if number > 0:
            print("Positive")
        case 0:
            print("Zero")
        case _:
            print("Negative")
```

8. 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.

```
x=input("Enter first string: ")
y=input("Enter second string: ")
print("Is both string are identical: ",
x==y)
print("Is first string come before second
string: ", x<y)
```

9. 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

```
year=int(input("Enter any year: "))
if year % 4 == 0 and year % 100 != 0:
        print ("Non century leap year")
elif year % 400 == 0:
```

```
        print("Century leap year")
elif year % 100 == 0:
        print ("Century non leap year")
else:
        print ("Non century non leap year")
```

10. 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

```
x=(input("Enter your favorite colour: "))
match x:
  case "Yellow":
    print("Monday")
  case "Blue":
    print("Tuesday")
  case "Orange":
    print("Wednesday")
  case "white":
    print("Thursday")
```

```
  case "Black":
    print("Friday")
  case "Red":
    print("Saturday")
  case "All other colours":
    print("Sunday")
```