Day 1:- date:-5/2/2025

Mutable:-LSD

-list

-dict

-set

Inheritance:- child class take property of parent class

-Single level

-multi level

-multiple

-hybrid

Abstraction:-

-hide unnecessary information form user.

Polymorphism:-

-Same function or method behave differently according to input given

Encapsulation:-

-Binding of data in single unit

Code:-

#DAY 1

#a=10

#b=20

#c=a+b

#print(c)

a=5

b=2

c = a==b

print(c)

a=5

b=2

c=3

d=200

print(a>b and a>c)

print(a>b and a<c)

print(a<b and a>c)

print(a<b and a<c)

print(not(a<b))

print(not(a>b))

#assignment operator

a=10

b=20

m=15

y=a + b + m

print(y)

m+= 10

print(m)

m-= 10

print(m)

m\*= 10

print(m)

m/= 10

print(m)

#in operator

st1="welcome to grreyshows"

print("to" in st1)

print("subs" in st1)

#not operator

st1="welcome to grreyshows"

print("to" not in st1)

#is operator

a=10

b="10"

print(a is b)

#operator precedency

value = (1+1)\*2\*\*4//3+4-1

print(value)

#implicit conversion

j="hello" + " "

k="geeky shows "

p=j + k

print(p)

w='10'

e='10'

r=w + e

print(r)

#explicit conversion

q=10

u='10'

print(type(u))

r=q + int(u)

print(r)

#variable store output

date=[10,20,-30,21.3,"hello"]

print(date)

print("welcome", end=" ")

print("to", end=" ")

print("geekyshow")

#variable store input

name= input("enter your name: ")

print(name)

print(type(name))

num=int(input("enter your number:"))

print(num)

print(type(num))

nm=input("enter your name:")

print("your name is",nm)

#escape sequence

print("welcome to \"Hello world\"")

print("welcome to \'Hello world\'")

#if statement

if 5>2:

    print("it is greate")

#if statement with group of statement

if 5>2:

    print("greater")

    print("5 is greater then 2")

    if(6<2):

        print("6 is greeater than 2")

print("rest of the code")

#if else

a=int(input("enter number greater than 2 :"))

if(a > 2):

    print("you have entered:",a)

else:

    print("the number is less than 2")

a=int(input("enter number greater than 2:"))

b=10000

if(a <= b):

    print("correct!! you have entered:",a)

else:

    print("warning!! your balance is insufficient:",a)

    print("your balance is:",b)

#elif

a=10

b=20

if a>b:

    print("a is grater than b")

elif a==b:

    print("a is equal to b")

elif a<b:

    print("a is less than b")

#while loop

a=2

while a<=20:

    print(a)

    a+=2

print("rest of the code")

i=0

while True:

    i+=1

    print(i)

    if(i == 5):

        break

print("rest of the code")

#nested while loop

i=1

while i<=3:

    print("outer loop",i)

    i+=1

    j=1

    while j<=5:

        print("inner loop",j)

        j+=1

print("rest of the code")

#range function

print("range  with stop")

a=range(5)

print(a[0])

print(a[1])

print(a[2])

print(a[3])

print(a[4])

c=range(-1,-10,-2)

print(c[0])

print(c[1])

print(c[2])

print(c[3])

c=range(-10,-1,2)

print(c[0])

print(c[1])

print(c[2])

print(c[3])

c=range(5,0,-1)

print(c[0])

print(c[1])

print(c[2])

print(c[3])

print(c[4])

c=range(0,5,1)

print(c[0])

print(c[1])

print(c[2])

print(c[3])

#for loop

st="geekyshows"

y=len(st)

print(y)

for ch in range(y):

    print(ch,"=",st[ch])

st="geekyshows"

y=len(st)

print(y)

i=0

while(i<y):

    print(i,"=",st[i])

    i+=1

print("rest of code")

a= range(5)

for i in a:

    print(i)

b=range(10)

for i in b:

    print(i)

st="GeekyShows"

for ch in st:

    print(ch)

for i in range(3):

    print("outer loop",i)

    for j in range(5):

        print("inner loop",j)

print("rest of the code")

for i in range(10):

    if(i == 5):

        continue

    print(i)

print("rest of the code")

#pass statement

for i in range(10):

    if(i == 5):

        pass

    print(i)

print("rest of the code")

#memory allocation

str1="steekyshows"

str2="Geekyshows"

str3="python"

str4=str3

print("str1",str1,id(str1))

print("str2",str2,id(str2))

print("str3",str3,id(str3))

print("str4",str4,id(str4))

#comparing string

#fstring

a=10

b=20

print(f"{a}")

print(f"{a} {b}")

print(f"{b} {a}")

a="samarth"

print(f"{a[::-1]}")

st="RACECAR"

str1= st[::-1]

print(str1)

if(st == str1):

    print("palindrome")

else:

    print("not palindrome")

#example

name="hello world"

str1=name.upper()

str2=name.title()

str3=name.capitalize()

str4=name.isupper()

str5=name.isdigit()

str6=name.isalpha()

str7=name.isalnum()

str8=name.lstrip()

print(name)

print(str1)

print(str2)

print(str3)

print(str4)

print(str5)

print(str6)

print(str7)

print(str8)

name="Geeky-shows"

old="Geeky"

new="New"

a=('hello','how','are','you')

b="Hi How Are You"

str1=name.replace(old,new)

str2=name.split('-')

str3=" ".join(a)

str4=name.startswith('Hi')

str5=name.endswith('ye')

print(name)

print(str1)

print(str2)

print(str3)

print(str4)

print(str5)

def issubsequence(string, substring):

    i=0

    j=0

    while i< len(substring) and j< len(string):

        if substring[i] == string[j]:

            i += 1

        j +=1

    return i == len(substring)

string="abcdefghi"

substring="adi"

result = issubsequence(string,substring)

print(result)

def issubsequence(string, substring):

    a=0

    b=0

    while a>len(substring) and b>len(string):

        if substring[a] == string[b]:

            a +=1

        b+=1

    return a == len(substring)

string="classmate"

substring="cla"

result = issubsequence(string,substring)

print(result)

text="samarthsabale"

if not text:

    print("empty string")

else:

    for char in text.lower():

        if char in("a","e","i","o","u"):

            print(f"{char} is a vowel")

        elif not char.isalpha():

            print(f"{char} is not a lette")

        else:

            print(f"{char} is a consonant")

month="february"

month\_31\_days =("janurary","march","may","july","August","october","december")

month\_30\_days = ("april","june","september","november")

if month in month\_31\_days:

    print(f"{month} has 31 days")

elif month in month\_30\_days:

    print(f"{month} has 30 days")

else:

    print(f"{month} has 28 days")

a=3

b=2

c=1

if a> b> c:

    print("decreasing order")

elif a < b < c:

    print("increasing order")

else:

    print("number is neither increasing or decreasing")