**python programs**

1. **write a python program to input a number and print whether it is positive or negative and if it is negative print negative of it and finally print done take input number is equal to -10.**

**sol:**

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

if num>=0:

print("positive")

else:

print("negative and positive of ",num," is ",abs(num))

print("done!")

1. **input 2 integers from user and compare x and y. efax is larger assign to variable highest or else assign it to y and if equal assign both to highest and finally print square of highest.**

**sol:**

x=int(input("enter number 1"))

y=int(input("enter number 2"))

if x>y:

print("first")

highest=x

elif x<y:

print("second")

highest=y

else:

print("equal")

highest=x,y

print(highest\*highest)

1. **pass to user to enter a integer and print square of number using format operator.**

**sol:**

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

c=pow(number,2)

print("the square is ",format(c))

1. **ask user to enter a number and print square of number and print length of result.**

**sol:**

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

c=pow(num,2)

print(c)

print("length of result= ",len(str(c)))

1. **ask ths user to enter some numbers and print maximum of numbers.**

**sol:**

num1=int(input())

num2=int(input())

num3=int(input())

print(max(num1,num2,num3))

1. **ask the user to enter an integer and find out and print number from 1 to that integer.**

**sol:**

n=int(input(“enter a number”))

while(n>0):

print(num,end=’ ‘)

n-=1

1. **ask the user to enter an integer and print factorial of the number entered.**

**sol:**

num=int(input(“enter a number for finding factorial”))

res=1

while(num>0):

res=res\*num

num-=1

print(res)

1. **use a while loop to print odd numbers from 1 to 10.**

**sol:**

n=1

while(n<=10):

print(n)

i+=2

1. **use a while loop to generate numbers from 1 to 10. if a number is divisible from 3 print 3 asterisks (\*\*\*), and if it is divisible by 5 print 5 asterisks(\*\*\*\*\*) otherwise print the number.**

**sol:**

i=1

while(i<=10):

if(i%3)==0:

print(3\*’\*’)

elif i%5==):

print(5\*’\*’)

else:

print(i)

1. **use a while loop to generate 10 to 1 numbers and print corresponding number of asterisks(\*).**

**sol:**

n=10

while n>0:

print(i x ‘\*’)

i-=1

1. **ask the user for a list of fruits and print each fruit in separate line.**

**sol:**

fruits=input(“enter a list of fruits separated by space”)

x=fruits.split(“ “)

for i in x:

print(i)

1. **ask the user to enter an integer n, store the square of all the odd numbers less than n in a list and print that list.**

**sol:**

n=int(input(“enter an integer”))\

list1=[]

for i in range(1,n,2):

list1.append(i\*i)

print(list1)

1. **ask the user to enter a list of integers separated by space and convert into list of integers but square each element and store its square into a tuple. put that into a list.**

**sol:**

s=input(“enter a list of integers”)

list1=[]

for i in s.split():

x=int(i)

list1.append((x,x\*x))

print(list1)

1. **ask the user to enter a string and convert this into a list of characters. sort this list in ascending order now eliminate any repeated value in list and print the list.**

**sol:**

s=input(“enter your string”)

list1=s.split()

res=[]

list1.sort()

for i in res:

if i not in res:

res.append(i)

1. **ask the user to enter a list of integers separated by space. for each integer store the string version of the key and integer version using dictionary method and print the dictionary.**

**sol:**

i=input(“enter a list of integers separated by space”)

list1=i.split()

d={}

for i in list1:

x=int(i)

d[i]=x

print(d)

1. **create a mapping from 3 character month name to month number. ask the user for a month either in lower case or upper case or mixed cases. print the corresponding number of month user entered.**

sol:

months={

“jan”:1,

“feb”:2,

“mar”:3,

“apr”:4,

“may”:5,

“jun”:6,

“jul”:7,

“aug”:8,

“sep”:9,

“oct”:10,

“nov”:11,

“dec”:12}

mon=input(“enter a month”)

mon.lower()

mon=mon[0:3]

print(months[mon})

1. **you are given date strings of the form “29,july,2022” . in other words numbers ,string and number with a comma separerted items.**

**write a program that takes such a string as input and prints a tuple(yyyy/mm/dd) where all are integers.**

sol:

dat=input(“enter date”)

s=dat.split(“,”)

s[1]=s[1].lower()

a=s[1]

b=a[0:3]

months={

“jan”:1,

“feb”:2,

“mar”:3,

“apr”:4,

“may”:5,

“jun”:6,

“jul”:7,

“aug”:8,

“sep”:9,

“oct”:10,

“nov”:11,

“dec”:12}

v=(int(s[2]),int(months[b]),int(s[0]))

print(v)

1. **define a function called prompt. the function showld ask the user to enter a name, the function should not take any argument, function should not return any thing . function should print “hello name”.**

def prompt():

name=input(“enter a name”)

print(“hello”+name)

prompt()

1. **define a function called fib taking one argument n. n>0 it is integer and but default to 8.return the first n integer of the fib sequence.**

def fib(n=8):

a,b=0,1

result=[0]

for i in range(n-1):

result.append(b)

a,b=b,a+b

return result

**20.define a function called power2() which takes no argument it should return which takes a single argument x but return 2x**

def power2():

def f(x):

return 2\*\*x

return f

**21. define a function called largest which takes a single argument.**

**the argument passed will be an opened file object**

**read the data in the file**

**assume that the data is separated by spaces and all numbers**

**find the maximum value in the file do not use load text.**

res=[]

f=open(“values.txt”,”r”)

def=largest(i):

x=f.read()

x=x.split()

print(x)

for i in x:

y=int(i)

res.append(y)

return max(res)

la=largest(f)

print(la)

**22)write a function called mysum**

**the function is passed a single thing with term separated by spaces.the string concentration contains both names and integer value in arbitrary order find the sum of all numbers in the string**

def mysum(s):

total=0

for word in s.split:

try:

total+=int(word)

except:

pass

return total

st=input(“enter a string with integers included :”)

t=mysum(t)

print(t)

**23)print tuple of above list**

x=int(input(“enter a number”))

l=[]

for i in range(1,x,2):

l.append(i\*i)

print(tuple(l))

**24)ask the user to enter a string convert this to lower case and count the no of occurrences of each in the string. hint use a dictionary**

**print the result in sorted order of characters**

text=input().lower()

result={}

for char in result:

if char in result:

result[char]+=1

else:

result[char]=1

for char in sorted (result):

print(char,result[char])

**25)open a pendulam.txt we and print the second column in pendulum.txt into a col2.txt file.**

f=open(“pendulum.txt”)

out=open(“col2.txt”,”w”)

for line in f:

fields=line.split()

print(fields[i],file=out)

f.close()

out.close()