1. Write a Python Program to find out largest among three numbers.

* **Algorithm:**

**Input :** num1, num2, num3: To store the three numbers

largest: To store the largest number found.

**Output :** Printing the largest number.

1. Start
2. if num1 >= num2

2.1. if num1 >= num3

2.1.1. largest = num1

2.2. else

2.2.1. largest = num3

1. else

3.1. if num2 >= num3

3.1.1. largest = num2

3.2. else

3.2.1. largest = num3

1. print larget
2. End

* **Source Code:**

n1 = int(input("Enter the 1st number: "))

n2 = int(input("Enter the 2nd number: "))

n3 = int(input("Enter the 3rd number: "))

if n1 > n2 and n1 > n3:

print(f"\n\t{n1} is the largest\n")

elif n2 > n3 and n2 > n3:

print(f"\n\t{n2} is the largest\n")

else:

print(f"\n\t{n3} is the largest\n")

* **Output:**

Enter the 1st number: 6

Enter the 2nd number: 4

Enter the 3rd number: 9

9 is the largest

1. Write a Python Program to check whether a given number is Perfect number or not.

* **Algorithm:**

**Input :** Take a number from the user.

**Output :** Print the given number is perfect or not.

1. Start
2. For I 🡨 0 to num do

2.1. if I%2 = 0 then sum = sum+i

1. if num = sum then print “The number is perfect”
2. else print “The number is not perfect”
3. End

* **Source Code:**

num = int(input("Enter the number: "))

sum = 0

for i in range(1,num):

if i % 2 == 0:

sum += i

if num == sum:

print(f"\n\t{num} is perfect number\n")

else:

print(f"\n\t{num} is not perfect number\n")

* **Output:**

Enter the number: 123

123 is not perfect number

Enter the number: 6

6 is perfect number

1. Write a Python Program to generate Prime numbers within a given range.

* **Algorithm:**

**Input :** Take a starting and ending number from the user.

**Output :** Print the prime numbers from given range.

1. Start
2. For I 🡨 0 to num do

2.1. if I%2 = 0 then sum = sum+i

1. if num = sum then print “The number is perfect”
2. else print “The number is not perfect”
3. End

* **Source Code:**

start = eval(input("Enter the starting range: "))

end = eval(input("Enter the ending range: "))

print(f"Prim numbers between {start} to {end} is: ",end=" ")

for i in range(start,end):

count = 0

for j in range(2,i):

if i%j == 0:

count += 1

if count == 0:

print(i,end=" ")

* **Output:**

Enter the starting range: 1

Enter the ending range: 10

Prim numbers between 1 to 10 is: 1 2 3 5 7

1. Write a Python Program to print the following patterns:-

\* \* \*

\* \* \* \* \* \* \* \*

\* \* \* \* \* \* \* \* \* \* \* \* \*

\* \* \* \* \* \* \* \* \* \* \* \* \* \*

\*

* **Algorithm:**

**Input :** Take a starting and ending number from the user.

**Output :** Print the prime numbers from given range.

1. Start
2. For I 🡨 0 to num do

2.1. if I%2 = 0 then sum = sum+i

1. if num = sum then print “The number is perfect”
2. else print “The number is not perfect”
3. End

* **Source Code:**

**# Pattern 1**

num = eval(input("Enter the number of lines: "))

for i in range(num):

for j in range(i+1):

print("\*",end=" ")

print()

**# Pattern 2**

num = eval(input("Enter the number of lines: "))

for i in range(num):

for k in range(num - i):

print(" ",end=" ")

for j in range(2\*i + 1):

print("\*",end=" ")

print()

**# Pattern 3**

n = int(input("Enter the number of lines: "))

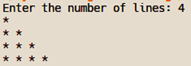
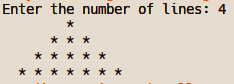
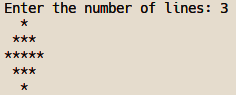
for i in range(n):

print(" " \* (n - i - 1) + "\*" \* (2 \* i + 1))

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

print(" " \* (n - i - 1) + "\*" \* (2 \* i + 1))

* **Output:**

**# Pattern 1 # Pattern 2 # Pattern 3**

1. Write a Python Program to check whether a given number is Palindrome number or not.

* **Algorithm:**

**Input :** Take a starting and ending number from the user.

**Output :** Print the prime numbers from given range.

1. Start
2. For I 🡨 0 to num do

2.1. if I%2 = 0 then sum = sum+i

1. if num = sum then print “The number is perfect”
2. else print “The number is not perfect”
3. End

* **Source Code:**

num = eval(input("Enter the number: "))

temp = num

rev = 0

while temp > 0:

digit = temp % 10

rev = rev \* 10 + digit

temp //= 10

if num == rev:

print("The number is palindrome")

else:

print("The number is not palindrome")

* **Output:**

Enter the number: 121

The number is palindrome

Enter the number: 124

The number is not palindrome

1. Write a Python Program to check whether a given number is divisible by 11 or not.

* **Algorithm:**

**Input :** Take a starting and ending number from the user.

**Output :** Print the prime numbers from given range.

1. Start
2. For I 🡨 0 to num do

2.1. if I%2 = 0 then sum = sum+i

1. if num = sum then print “The number is perfect”
2. else print “The number is not perfect”
3. End

* **Source Code:**

num = eval(input("Enter a number: "))

if num % 11 == 0:

print("The number is divisible by 11")

else:

print("The number is not divisible by 11")

* **Output:**

Enter a number: 121

The number is divisible by 11

Enter a number: 10

The number is not divisible by 11

1. Write a Python Program to check whether a given number is divisible by 11 or not.

* **Algorithm:**

**Input :** Take a starting and ending number from the user.

**Output :** Print the prime numbers from given range.

1. Start
2. For I 🡨 0 to num do

2.1. if I%2 = 0 then sum = sum+i

1. if num = sum then print “The number is perfect”
2. else print “The number is not perfect”
3. End

* **Source Code:**

num = eval(input("Enter a number: "))

if num % 11 == 0:

print("The number is divisible by 11")

else:

print("The number is not divisible by 11")

* **Output:**

Enter a number: 121

The number is divisible by 11

Enter a number: 10

The number is not divisible by 11

1. Write a Python Program to calculate GCD and LCM of two given numbers.

* **Algorithm:**

**Input :** Take a starting and ending number from the user.

**Output :** Print the prime numbers from given range.

1. Start
2. For I 🡨 0 to num do

2.1. if I%2 = 0 then sum = sum+i

1. if num = sum then print “The number is perfect”
2. else print “The number is not perfect”
3. End

* **Source Code:**

a = eval(input("Enter the 1st number: "))

b = eval(input("Enter the 2nd number: "))

x = a

y = b

while b != 0:

temp = b

b = a % b

a = temp

gcd = a

lcm = (x \* y) / gcd

print("The GCD of", x, "and", y, "is", gcd)

print("The LCM of", x, "and", y, "is", lcm)

* **Output:**

Enter a number: 121

The number is divisible by 11

Enter a number: 10

The number is not divisible by 11

1. Write a Python Program to check whether a given number is Armstrong number or not.

* **Algorithm:**

**Input :** Take a starting and ending number from the user.

**Output :** Print the prime numbers from given range.

1. Start
2. For I 🡨 0 to num do

2.1. if I%2 = 0 then sum = sum+i

1. if num = sum then print “The number is perfect”
2. else print “The number is not perfect”
3. End

* **Source Code:**

num = eval(input("Enter the number: "))

temp = num

sum = 0

while temp != 0:

digit = temp % 10

temp = temp // 10

sum += pow(digit,3)

if sum == num:

print("\n\tThe number is armstrong number\n")

else:

print("\n\tThe number is not armstrong number\n")

* **Output:**

Enter the number: 153

The number is Armstrong number

Enter the number: 123

The number is not Armstrong number

1. Write a Python Program to take a input name with surname. Display the input in abbreviated form.

* **Algorithm:**

**Input :** Take a starting and ending number from the user.

**Output :** Print the prime numbers from given range.

1. Start
2. For I 🡨 0 to num do

2.1. if I%2 = 0 then sum = sum+i

1. if num = sum then print “The number is perfect”
2. else print “The number is not perfect”
3. End

* **Source Code:**

string = str(input("Enter the string: "))

words = string.split()

abb = ''

for i in words:

if not i[0].isupper():

abb += i[0].upper()

else:

abb += i[0]

abb += '.'

print(f"The abbreviation form of your string: {abb}")

* **Output:**

Enter the string: Anit Halder

The abbreviation form of your string: A.H.

1. Write a Python Program to print the longest word from a text of line.

* **Algorithm:**

**Input :** Take a starting and ending number from the user.

**Output :** Print the prime numbers from given range.

1. Start
2. For I 🡨 0 to num do

2.1. if I%2 = 0 then sum = sum+i

1. if num = sum then print “The number is perfect”
2. else print “The number is not perfect”
3. End

* **Source Code:**

string = str(input("Enter the string: "))

s = string.split()

l = [len(i) for i in s]

print(f"\nThe longest word from line of text is: {s[l.index(max(l))]} \n")

* **Output:**

Enter the string: I am anit halder

The longest word from line of text is: halder

1. Write a Python Program to print the longest line from a text of line.

* **Algorithm:**

**Input :** Take a starting and ending number from the user.

**Output :** Print the prime numbers from given range.

1. Start
2. For I 🡨 0 to num do

2.1. if I%2 = 0 then sum = sum+i

1. if num = sum then print “The number is perfect”
2. else print “The number is not perfect”
3. End

* **Source Code:**

num = eval(input("Enter the how many number of lines you want to read: "))

string = []

for i in range(num):

string.append(str(input("Enter the string: ")))

l = [len(i) for i in string]

print(f"\nThe longest word from line of text is: {string[l.index(max(l))]} \n")

* **Output:**

Enter the how many number of lines you want to read: 3

Enter the string: Myself Anit Halder

Enter the string: It's my last year in college

Enter the string: I am a very bad guy

The longest word from line of text is: It's my last year in college

1. Write a Python Program to check whether a given particular word in a text of lines is present or not.

* **Algorithm:**

**Input :** Take a starting and ending number from the user.

**Output :** Print the prime numbers from given range.

1. Start
2. For I 🡨 0 to num do

2.1. if I%2 = 0 then sum = sum+i

1. if num = sum then print “The number is perfect”
2. else print “The number is not perfect”
3. End

* **Source Code:**

num = eval(input("Enter the how many number of lines you want to read: "))

strings = []

for i in range(num):

strings.append(str(input("Enter the string: ")))

flag = False

check = str(input("Enter a word you want to find: "))

for i in strings:

if check in i:

flag = True

if flag == True:

print("The word is in the text of lines")

else:

print("The word is not in the text of lines")

* **Output:**

Enter the how many number of lines you want to read: 3

Enter the string: Myself anit halder

Enter the string: It's my last year in college

Enter the string: I am a very bad guy

Enter a word you want to find: my

The word is in the text of lines

1. Write a Python program to construct another list L2 which consists the indices of all non-zero elements of list L1.

* **Algorithm:**

**Input :** Take a starting and ending number from the user.

**Output :** Print the prime numbers from given range.

1. Start
2. For I 🡨 0 to num do

2.1. if I%2 = 0 then sum = sum+i

1. if num = sum then print “The number is perfect”
2. else print “The number is not perfect”
3. End

* **Source Code:**

l = [10, 0, 2, 0, 0, 5, 7]

print("The given list is: ",l)

l = [l.index(i) for i in l if i != 0]

print("The list of indices of all non-zero elements of list: ",l)

* **Output:**

The given list is: [10, 0, 2, 0, 0, 5, 7]

The list of indices of all non-zero elements of list: [0, 2, 5, 6]

1. Write a python program to print the maximum length of word from a list of words.

* **Algorithm:**

**Input :** Take a starting and ending number from the user.

**Output :** Print the prime numbers from given range.

1. Start
2. For I 🡨 0 to num do

2.1. if I%2 = 0 then sum = sum+i

1. if num = sum then print “The number is perfect”
2. else print “The number is not perfect”
3. End

* **Source Code:**

lis = ['Apple', 'Orange', 'Mango', 'Pineapple']

max = ''

for i in lis:

if len(i) > len(max):

max = i

print("The maximum word is: ",max)

* **Output:**

The given word list is: ['Apple', 'Orange', 'Mango', 'Pineapple']

The maximum word is: Pineapple

1. Write a python program to print those pair of index of value that is formed a particular number in the given list.

* **Algorithm:**

**Input :** Take a starting and ending number from the user.

**Output :** Print the prime numbers from given range.

1. Start
2. For I 🡨 0 to num do

2.1. if I%2 = 0 then sum = sum+i

1. if num = sum then print “The number is perfect”
2. else print “The number is not perfect”
3. End

* **Source Code:**

lis = [10, 20, 30, 40, 50, 60, 70]

print("The given list of numbers: ", lis)

num = eval(input("Enter a number: "))

lis = [(lis.index(lis[i]), lis.index(lis[j])) for i in range(len(lis)) for j in range(len(lis)) if lis[i] + lis[j] == num]

print("The pairs are: ", end="")

for i in lis:

print(i, end=" ")

print()

* **Output:**

The given list of numbers: [10, 20, 30, 40, 50, 60, 70]

Enter a number: 60

The pairs are: (0, 4) (1, 3) (2, 2) (3, 1) (4, 0)

1. Write a python program to print only even pair elements from a given nested list.

* **Algorithm:**

**Input :** Take a starting and ending number from the user.

**Output :** Print the prime numbers from given range.

1. Start
2. For I 🡨 0 to num do

2.1. if I%2 = 0 then sum = sum+i

1. if num = sum then print “The number is perfect”
2. else print “The number is not perfect”
3. End

* **Source Code:**

lis = [[2, 6], [3, 8], [10, 14], [1, 10]]

print("The given list of numbers: ", lis)

print("The even pairs are: ", end="")

newLis = []

for i in lis:

count = 0

for j in i:

if j % 2 == 0:

count += 1

if count == len(i):

newLis.append(i)

for i in newLis:

print(i, end=" ")

print()

* **Output:**

The given list of numbers: [[2, 6], [3, 8], [10, 14], [1, 10]]

The even pairs are: [2, 6] [10, 14]

1. Write a Python program to rotate the element of the list such that, the element of the first index moves to the second index , the element of the second index moves to the third index ... and at last the element of the last index moves to the first index.

* **Algorithm:**

**Input :** Take a starting and ending number from the user.

**Output :** Print the prime numbers from given range.

1. Start
2. For I 🡨 0 to num do

2.1. if I%2 = 0 then sum = sum+i

1. if num = sum then print “The number is perfect”
2. else print “The number is not perfect”
3. End

* **Source Code:**

lis = [1, 2, 3, 4, 5, 6]

print("The given list of numbers: ", lis)

num = eval(input("Enter the index from where you want to rotate: "))

lis = lis[num - 1:] + lis[:num - 1]

print("The rotated list is: ", lis)

* **Output:**

The given list of numbers: [1, 2, 3, 4, 5, 6]

Enter the index from where you want to rotate: 3

The rotated list is: [3, 4, 5, 6, 1, 2]

1. Given two list as L1 and L2. Construct the third list L3 in which the elements should be the value of list L2 , followed by the value of list L1 alternatively.

* **Algorithm:**

**Input :** Take a starting and ending number from the user.

**Output :** Print the prime numbers from given range.

1. Start
2. For I 🡨 0 to num do

2.1. if I%2 = 0 then sum = sum+i

1. if num = sum then print “The number is perfect”
2. else print “The number is not perfect”
3. End

* **Source Code:**

L1 = [1, 2, 3, 4]

L2 = [10, 20, 30, 40, 50, 60]

L3 = []

print("Input list 1: ", L1)

print("Input list 2: ", L2)

for i in range(max(len(L1), len(L2))):

if i < len(L1):

L3.append(L1[i])

if i < len(L2):

L3.append(L2[i])

print("Output: ", L3)

* **Output:**

Input list 1: [1, 2, 3, 4]

Input list 2: [10, 20, 30, 40, 50, 60]

Output: [1, 10, 2, 20, 3, 30, 4, 40, 50, 60]

1. Write a Python program to eliminate the duplicate numbers from a list.

* **Algorithm:**

**Input :** Take a starting and ending number from the user.

**Output :** Print the prime numbers from given range.

1. Start
2. For I 🡨 0 to num do

2.1. if I%2 = 0 then sum = sum+i

1. if num = sum then print “The number is perfect”
2. else print “The number is not perfect”
3. End

* **Source Code:**

lis = [1, 2, 3, 3, 2, 1, 4, 3, 5, 6, 5]

ls = []

for i in lis:

if i not in ls:

ls.append(i)

print("The given list is: ", lis)

print("The new list is: ", ls)

* **Output:**

The given list is: [1, 2, 3, 3, 2, 1, 4, 3, 5, 6, 5]

The new list is: [1, 2, 3, 4, 5, 6]

1. Write a Python Program to store 5 individual marks of n numbers of students into a tuple. Find out the average marks of each student and also print the index of which average comes 1st position.

* **Algorithm:**

**Input :** Take a starting and ending number from the user.

**Output :** Print the prime numbers from given range.

1. Start
2. For I 🡨 0 to num do

2.1. if I%2 = 0 then sum = sum+i

1. if num = sum then print “The number is perfect”
2. else print “The number is not perfect”
3. End

* **Source Code:**

marks = ((40, 50, 30, 70), (60, 80, 90, 50), (80, 70, 50, 40), (30, 50, 70,260))

l = []

for i in marks:

l.append(sum(i) / len(i))

print("The list of marks each student is: ", marks)

print("The index of highest avarage is: ", l.index(max(tuple(l))))

* **Output:**

The list of marks each student is: ((40, 50, 30, 70), (60, 80, 90, 50), (80, 70, 50, 40), (30, 50, 70, 260))

The index of highest avarage is: 3

1. Write a Python Program to check Prime numbers from a tuple and store the index of those prime numbers into another tuple.

* **Algorithm:**

**Input :** Take a starting and ending number from the user.

**Output :** Print the prime numbers from given range.

1. Start
2. For I 🡨 0 to num do

2.1. if I%2 = 0 then sum = sum+i

1. if num = sum then print “The number is perfect”
2. else print “The number is not perfect”
3. End

* **Source Code:**

from sympy import isprime

numbers = (2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15)

prime\_indices = tuple(index for index, num in enumerate(numbers) if isprime(num))

print("The given lis of numbers: ", numbers)

print("The prime numbers are: ", prime\_indices)

* **Output:**

The given lis of numbers: (2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15)

The prime numbers are: (0, 1, 3, 5, 9, 11)

1. Write a Python Program to take input of n numbers of students’ names and their total marks. Display the student’s name who comes first.

* **Algorithm:**

**Input :** Take a starting and ending number from the user.

**Output :** Print the prime numbers from given range.

1. Start
2. For I 🡨 0 to num do

2.1. if I%2 = 0 then sum = sum+i

1. if num = sum then print “The number is perfect”
2. else print “The number is not perfect”
3. End

* **Source Code:**

students = []

marks = []

num = int(input("Enter the number of students: "))

for i in range(num):

name = input("\nEnter the name of the student: ")

mark = eval(input("Enter the total marks of the student: "))

students.append(name)

marks.append(mark)

students = tuple(students)

marks = tuple(marks)

print("\nThe name of the student who comes first: ",students[marks.index(max(marks))])

* **Output:**

Enter the number of students: 3

Enter the name of the student: anit

Enter the total marks of the student: 300

Enter the name of the student: ajoy

Enter the total marks of the student: 285

Enter the name of the student: arpan

Enter the total marks of the student: 295

The name of the student who come first: anit

1. Given a dictionary d1 = {1:’A’, 2:’B’, 3:’C’} . Write a Python Program to create another dictionary d2 such that the data values of key and value of d1 just reverse of d2.

* **Algorithm:**

**Input :** Take a starting and ending number from the user.

**Output :** Print the prime numbers from given range.

1. Start
2. For I 🡨 0 to num do

2.1. if I%2 = 0 then sum = sum+i

1. if num = sum then print “The number is perfect”
2. else print “The number is not perfect”
3. End

* **Source Code:**

dic = {1: 'one', 2: 'two', 3: 'three', 4: 'four', 5: 'five'}

print("The given dictionary is: ", dic)

new\_dic = {v: k for k, v in dic.items()}

print("The new dictionary is: ", new\_dic)

* **Output:**

The given dictionary is: {1: 'one', 2: 'two', 3: 'three', 4: 'four', 5: 'five'}

The new dictionary is: {'one': 1, 'two': 2, 'three': 3, 'four': 4, 'five': 5}

1. Write a Python Program that defines a dictionary to store names of 5 cricketers along with their total runs to do the following:

a) Sort the dictionary in ascending order of their runs.

b) Display the name of cricketer with highest runs.

c) Display only the name of cricketers.

d) remove the cricketer having the lowest runs.

* **Algorithm:**

**Input :** Take a starting and ending number from the user.

**Output :** Print the prime numbers from given range.

1. Start
2. For I 🡨 0 to num do

2.1. if I%2 = 0 then sum = sum+i

1. if num = sum then print “The number is perfect”
2. else print “The number is not perfect”
3. End

* **Source Code:**

L1 = [1, 2, 3, 4]

L2 = [10, 20, 30, 40, 50, 60]

L3 = []

print("Input list 1: ", L1)

print("Input list 2: ", L2)

for i in range(max(len(L1), len(L2))):

if i < len(L1):

L3.append(L1[i])

if i < len(L2):

L3.append(L2[i])

print("Output: ", L3)

* **Output:**

Input list 1: [1, 2, 3, 4]

Input list 2: [10, 20, 30, 40, 50, 60]

Output: [1, 10, 2, 20, 3, 30, 4, 40, 50, 60]

1. Write a Python Program that accepts a hyphen-separated sequence of words as input and print the words in also hyphen-separated after sorting them alphabetically.

* **Algorithm:**

**Input :** Take a starting and ending number from the user.

**Output :** Print the prime numbers from given range.

1. Start
2. For I 🡨 0 to num do

2.1. if I%2 = 0 then sum = sum+i

1. if num = sum then print “The number is perfect”
2. else print “The number is not perfect”
3. End

* **Source Code:**

L1 = [1, 2, 3, 4]

L2 = [10, 20, 30, 40, 50, 60]

L3 = []

print("Input list 1: ", L1)

print("Input list 2: ", L2)

for i in range(max(len(L1), len(L2))):

if i < len(L1):

L3.append(L1[i])

if i < len(L2):

L3.append(L2[i])

print("Output: ", L3)

* **Output:**

Input list 1: [1, 2, 3, 4]

Input list 2: [10, 20, 30, 40, 50, 60]

Output: [1, 10, 2, 20, 3, 30, 4, 40, 50, 60]

1. Write a Python Program to count the lines, words, characters from a text file.

* **Algorithm:**

**Input :** Take a starting and ending number from the user.

**Output :** Print the prime numbers from given range.

1. Start
2. For I 🡨 0 to num do

2.1. if I%2 = 0 then sum = sum+i

1. if num = sum then print “The number is perfect”
2. else print “The number is not perfect”
3. End

* **Source Code:**

L1 = [1, 2, 3, 4]

L2 = [10, 20, 30, 40, 50, 60]

L3 = []

print("Input list 1: ", L1)

print("Input list 2: ", L2)

for i in range(max(len(L1), len(L2))):

if i < len(L1):

L3.append(L1[i])

if i < len(L2):

L3.append(L2[i])

print("Output: ", L3)

* **Output:**

Input list 1: [1, 2, 3, 4]

Input list 2: [10, 20, 30, 40, 50, 60]

Output: [1, 10, 2, 20, 3, 30, 4, 40, 50, 60]

1. Write a Python Program to display the longest line from a text file.

* **Algorithm:**

**Input :** Take a starting and ending number from the user.

**Output :** Print the prime numbers from given range.

1. Start
2. For I 🡨 0 to num do

2.1. if I%2 = 0 then sum = sum+i

1. if num = sum then print “The number is perfect”
2. else print “The number is not perfect”
3. End

* **Source Code:**

L1 = [1, 2, 3, 4]

L2 = [10, 20, 30, 40, 50, 60]

L3 = []

print("Input list 1: ", L1)

print("Input list 2: ", L2)

for i in range(max(len(L1), len(L2))):

if i < len(L1):

L3.append(L1[i])

if i < len(L2):

L3.append(L2[i])

print("Output: ", L3)

* **Output:**

Input list 1: [1, 2, 3, 4]

Input list 2: [10, 20, 30, 40, 50, 60]

Output: [1, 10, 2, 20, 3, 30, 4, 40, 50, 60]