

1. Write a python program to find the first N prime numbers.

```
In [51]: 1 n=int(input()) #taking the input
          2
          3 for i in range (2,n+1): #Running the loop
          4     flag=0
          5     j=2
          6     while(j<=i):
          7         if(i%j==0): #checking divisibility
          8             flag=flag+1 #updating flag
          9         j=j+1
         10     if(flag==1):
         11         print(i) #printing the prime number
         12
```

KeyboardInterrupt

Traceback (most recent call last)

Cell In[51], line 1

```
----> 1 n=int(input()) #taking the input
      3 for i in range (2,n+1): #Running the loop
      4     flag=0
```

File ~\anaconda3\Lib\site-packages\ipykernel\kernelbase.py:1175, in Kernel.raw_input(self, prompt)

```
1171 if not self._allow_stdin:
1172     raise StdinNotImplementedError(
1173         "raw_input was called, but this frontend does not support input requests."
1174     )
-> 1175 return self._input_request(
1176     str(prompt),
1177     self._parent_ident["shell"],
1178     self.get_parent("shell"),
1179     password=False,
1180 )
```

File ~\anaconda3\Lib\site-packages\ipykernel\kernelbase.py:1217, in Kernel._input_request(self, prompt, ident, parent, password)

```
1214         break
1215 except KeyboardInterrupt:
1216     # re-raise KeyboardInterrupt, to truncate traceback
-> 1217     raise KeyboardInterrupt("Interrupted by user") from None
1218 except Exception:
1219     self.log.warning("Invalid Message:", exc_info=True)
```

KeyboardInterrupt: Interrupted by user

2. Write the python code that calculates the salary of an employee.

Prompt the user to enter the "Basic Salary,HRA, TA, and DA. Add these components to calculate the Gross Salary. Also,deduct" 10% of salary from the Gross Salary to be paid as tax and display gross minus tax as net salary.

```
In [ ]: 1 print('Enter your:\nBasic Salary\nHRA\nTA\nDA\n')
        2 basic=int(input())
        3 HRA=int(input())
        4 TA=int(input())
        5 DA=int(input())
        6 Total=basic+HRA+TA+DA
        7 tax=Total*.10
        8 gross=Total-tax
        9 print('tax :',tax)
        10 print('Gross Salary:',gross)
```

3. Write a python program to search for a string in the given list.

```
In [ ]: 1 list=['hi','hello','how','are','you']
        2 s='how'
        3
        4 if s in list:
        5     print('String present')
        6 else:
        7     print('String not present')
```

4. Write a Python function that accepts a string and calculates the number of upper-case letters and lower-case letters.

```
In [ ]: 1 print('Enter a string')
2 s=input()
3 count1=0
4 count2=0
5 for i in range(len(s)):
6     if s[i].isupper():
7         count1+=1
8     if s[i].islower():
9         count2+=1
10
11 print('No of UPPER case letters are:',count1)
12 print('No of LOWER case letters are:',count2)
```

5. Write a program to display the sum of odd numbers and even numbers that fall between 12 and 37.

```
In [ ]: 1 even=0
2 odd=0
3
4 for i in range(12,37):
5     if i%2==0:
6         even+=i
7     else:
8         odd+=i
9 print('Even sum is',even)
10 print('Odd sum is',odd)
```

6. Write a python Program to print the table of any number.

```
In [ ]: 1 print('Enter the n vale')
2 n=int(input())
3 for i in range(1,11):
4     print(i*n)
```

7. Write a Python program to sum the first 10 prime numbers.

```
In [ ]: 1 for i in range (2,n+1):
        2     flag=0
        3     j=2
        4     while(j<=i):
        5         if(i%j==0):
        6             flag=flag+1
        7         j=j+1
        8     if(flag==1):
        9         print(i)
```

8. Write a python program to implement arithmetic operations using nested if statement.

```
In [ ]: 1 x=int(input('Enter the number :'))
        2 y=int(input('Enter the number :'))
        3 op=input('Enter the operator :')
        4
        5 if op == '+':
        6     print(x+y)
        7 elif op == '-':
        8     print(x-y)
        9 elif op == '*':
        10    print(x*y)
        11 elif op == '/':
        12    print(x/y)
        13 elif op == '%':
        14    print(x%y)
        15 else:
        16    print('Give right operator')
```

9. Write a python program to take the temperature in Celsius and convert it to a Fahrenheit.

```
In [ ]: 1 c=float(input('Enter temperature in Celsius: '))
        2 print('Fahrenheit',(c*9/5)+32)
```

10. Write a python program to find a maximum and minimum number in a list without using an inbuilt function.

```
In [ ]: 1 list=[10,2,4,8,7,1]
2 for i in range(len(list)-1):
3     for j in range(len(list)-i-1):
4         if(list[i] < list[i+1]):
5             temp=list[i]
6             list[i]=list[i+1]
7             list[i+1]=temp
8
9 print('Maximum is:',list[0])
10 print('Minimum is:',list[len(list)-1])
```

11. Write a program in python to print out the number of seconds in 30-day month 30 days, 24 hours in a day,60 minutes per day,60 seconds in a minute.

```
In [52]: 1 m=60
2 h=60*60
3 day=24*60*60
4 month=30*24*60*60
5 print('Number of seconds in a minute :',m)
6 print('Number of seconds in an hour :',h)
7 print('Number of seconds in a day :',day)
8 print('Number of seconds in a month of 30 days :',month)
9
```

```
Number of seconds in a minute : 60
Number of seconds in an hour : 3600
Number of seconds in a day : 86400
Number of seconds in a month of 30 days : 2592000
```

12. Write a program in python to print out the number of seconds in a year.

```
In [64]: 1 # Python program to check if year is a Leap year or not
2 day=24*60*60
3 year = int(input('Enter the year : '))
4 if (year % 400 == 0) and (year % 100 == 0) or (year % 4 ==0) and (year % 100 != 0):
5     print('Seconds in the year {} are'.format(year),366*day)
6 else:
7     print('Seconds in the year {} are'.format(year),365*day)
```

```
Enter the year : 2024
Seconds in the year 2024 are 31622400
```

13. A high-speed train can travel at an average speed of 150 mph, how long will it take a train travelling at this speed to travel from London to Glasgow which is 414 milesaway?

```
In [66]: 1 distance=414
          2 speed=150
          3 time=distance/speed
          4 print(time, 'hours')
```

2.76 hours

14. Write a python program that defines a variable called days_in_each_school_year and assign 192 to the variable. The program should then print out the total hours that you spend in school from year 7 to year 11, if each day you spend 6 hours in school
days_in_each_school_year = 192"

```
In [69]: 1 days_in_each_school_year=192
          2 Total_hours_spent=192*6*(11-7)
          3 print('total hours that you spend in school from year 7 to year 11 is :',
```

total hours that you spend in school from year 7 to year 11 is : 4608 hours

15. If the age of Ram, Sam and Khan are input through the keyboard, write a python program to determine the eldest and youngest of the three.

```
In [77]: 1 ram=int(input("Enter Ram's age :"))
2 sam=int(input("Enter Sam's age :"))
3 khan=int(input("Enter Khan's age :"))
4
5 eldest=max(ram,sam,khan)
6 youngest=min(ram,sam,khan)
7
8 if eldest==ram:
9     print('Ram is the eldest')
10 elif eldest==sam:
11     print('Sam is the eldest')
12 else:
13     print('Khan is the eldest')
14
15 if youngest==ram:
16     print('Ram is the youngest')
17 elif youngest==sam:
18     print('Sam is the youngest')
19 else:
20     print('Khan is the youngest')
```

```
Enter Ram's age :24
Enter Sam's age :32
Enter Khan's age :45
Khan is the eldest
Ram is the youngest
```

16. Write a python program to rotate a list by right n times with and without slicing technique.

```

In [131]: 1  #without slicing
          2  n=int(input('Enter n value'))
          3  """list=[1,2,4,6,8,'hi']
          4
          5
          6  for i in range(n):
          7      c=list.pop()
          8      list.insert(0,c)
          9
         10  list"""
         11
         12  #with slicing
         13  list=[1,2,4,6,8,'hi']
         14  for i in range(n):
         15      list=list[-1:]+list[:5]
         16  list
         17
         18
         19
         20

```

Enter n value2

Out[131]: [8, 'hi', 1, 2, 4, 6]

17.Patterns

```

In [ ]: 1  #1.
        2

```

```

In [136]: 1  #2
          2  for i in range(6):
          3      for j in range(i):
          4          print('*',end='')
          5      print()

```

```

*
* *
* * *
* * * *
* * * * *

```



```
In [167]: 1 #3
          2 for i in range(5):
          3     for j in range(5-(2*(i+1))):
          4         print("1",end='')
          5     print()
          6
          7
          8
```

```
111
1
```

```
In [148]: 1 #4
          2 s='python'
          3 for i in range(len(s)+1):
          4     print(s[:i])
          5     print()
          6 print()
          7
```

p

py

pyt

pyth

pytho

python

```
In [ ]: 1
```