Shubhangi_Dhikale_35

1.Python Program for Find largest prime factor of a number

```
In [1]: def max_prime_fact(n):
            i=2
            while i*i<=n:
                if n%i:
                    i+=1
                else:
                    n//=i
            return n
        print(max_prime_fact(1267))
```

181

2.Python Program for Product of unique prime factors of a number

```
In [2]: def productPrimeFactor(n):
            product=1
            for i in range(2,n+1):
                if (n%i==0):
                    isprime=1
                    for j in range(2,int(i/2+1)):
                        if (i%j==0):
                            isprime=0
                            break
                    if (isprime):
                        product=product*i
            return product
        #main
        n=18
        print(productPrimeFactor(n))
        n=12
        print(productPrimeFactor(n))
        n=120
        print(productPrimeFactor(n))
```

120
6
30

3.Python Program to find Factorial of Number

```python
In [4]:  def factorial(n):
             fact=1
             for i in range(1,n+1):
                 fact=fact*i
             return fact
         n=int(input("enter the value:"))
         factorial(n)
```

```
enter the value:5
```

Out[4]: 120

4.Python Program for Find sum of odd factors of a number

```python
In [12]:  def odd_sum(num):
              list1=[]
              odd_list=[]
              sum1=0
              for i in range(1,num+1):
         #          if n%i==0:
                      list1.append(i)
              print("list of all factors:",list1)
              for i in list1:
                  if i%2!=0:
                      odd_list.append(i)
              print("odd list:",odd_list)
              for i in odd_list:
                  sum1+=i
              print("sum of all odd_factor:",sum1)
          num=int(input("enter the number:"))
          odd_sum(num)
```

```
enter the number:10
list of all factors: [1, 2, 3, 4, 5, 6, 7, 8, 9, 10]
odd list: [1, 3, 5, 7, 9]
sum of all odd_factor: 25
```

```python
In [15]:  def odd_fact(n):
              sum1=0
              for i in range(n):
                  if i%2!=0:
                      sum1+=i
              return sum1
          n=int(input("enter the number:"))
          print("sum of all odd factor:",odd_fact(n))
```

```
enter the number:10
sum of all odd factor: 25
```

5.Python Program to Check if binary representation is a palindrome

```python
In [16]: def Palindrome(num):
             num1=bin(num)[2:]

             if num1==num1[::-1]:
                 print(f'binary representation of {num} is a palindrome')
             else:
                 print(f'binary representation of {num} is not palindrome')
         Palindrome(9)
```

```
binary representation of 9 is a palindrome
```

6.Python Program for Number of elements with odd factors in a given range

```python
In [21]: def odd_fact(start,end):
             list1=[]
             for i in range(start,end):
                 if i%2!=0:
                     list1.append(i)
             return list1
         odd_fact(1,20)
```

```
Out[21]: [1, 3, 5, 7, 9, 11, 13, 15, 17, 19]
```

7.Python Program for Common Divisors of Two Numbers

```python
In [24]: def common_divisor(a,b):
             c1=[]
             c2=[]
             for i in range(1,a+1):
                 if a%i==0:
                     c1.append(i)
             for i in range(1,b+1):
                 if b%i==0:
                     c2.append(i)
             return(list(set(c1).intersection(c2)))
         print("common divisor of:",common_divisor(12,24))
         print(common_divisor(4,2))
```

```
common divisor of: [1, 2, 3, 4, 6, 12]
[1, 2]
```

8.Python Program to Check if a count of divisors is even or odd

```
In [26]:  def count_of_divisor(n):
              div=[]
              for i in range(1,n+1):
                  if n%i==0:
                      div.append(i)
              print(div)
              if len(div)%2==0:
                  print("count of divisor is even")
              else:
                  print("count of divisor is odd")
          n=int(input("enter the number"))
          count_of_divisor(n)
```

```
enter the number15
[1, 3, 5, 15]
count of divisor is even
```

9.Python Program to Find the minimum sum of factors of a number

```
In [20]:  def findMinSum(num):
              sum=0
              i=2
              while(i*i <= num):
                  while(num % i==0):
                      sum+=i
                      num//=i
                      i+=1
                  sum +=num
              return sum
          num=int(input("enter the number to check:"))
          print("Minimum sum of factor is:",findMinSum(num))
```

```
enter the number to check:12
Minimum sum of factor is: 7
```

10.Python Program to find Difference between sums of odd and even digits

```python
In [1]: def diff_sum(n):
            even_sum=0
            odd_sum=0
            str1=str(n)
            odd_num=str1[1::2]
            even_num=str1[::2]
            for i in even_num:
                even_sum+=int(i)
            for i in odd_num:
                odd_sum+=int(i)
            return (abs(odd_sum-even_sum))
        n=int(input("enter num:",))
        print("sum of odd and even:",diff_sum(n))
```

```
enter num:1234567
sum of odd and even: 4
```

11.Python Program for Largest and Smallest K digit number divisible by X

```python
In [1]: def answer (X,K):
            MIN=pow(10,K-1)

            if(MIN%X ==0):
                return (MIN)

            else:
                return ((MIN + X)-((MIN + X)%X))

        X=83
        K=5
        print(answer(X,K))
```

```
10043
```

12.Python Program to calculate the area of a Tetrahedron

```python
In [2]: def tetrahedron_area(a):
            Area=(3**0.5)*(a**2)
            return Area
        a=int(input("Enter the length of edge:"))
        print("Area of tetrahedron is:",tetrahedron_area(a))
```

```
Enter the length of edge:5
Area of tetrahedron is: 43.30127018922193
```

13.Python Program to Find the perimeter of a cylinder

```
In [5]:  def Perimeter_of_cylinder(d,h):
             perimeter=2*(d+h)
             return perimeter
         d=int(input("enter the diameter:"))
         h=int(input("enter the heigth:"))
         print("Perimeter of cylinder:",Perimeter_of_cylinder(d,h))
```

```
enter the diameter:4
enter the heigth:5
Perimeter of cylinder: 18
```

14.Python Program to Find the vertex, focus, and directrix of a parabola

```
In [8]:  def parabola(a,b,c):
             print('vertex:(',(-b/(2*a)),',',(((4*a*c)-(b*b))/4*a)),')'
             print('focus:(',(-b/(2*a)),',',(((4*a*c)-(b*b)+1)/4*a)),')'
             print('directix:(',(int)(c-((b**2)+1)*4*a)),')'


         a=int(input())
         b=int(input())
         c=int(input())
         parabola(a,b,c)
```

```
15
14
23
vertex:( -0.4666666666666667 , 4440.0
focus:( -0.4666666666666667 , 4443.75
directix:( -11797
```

15.Python program to find the most occurring character and its count

```
In [9]:  str1="fastandforwad"
         list1=[]
         list2=[]
         for i in str1:
             if i not in list1:
                 list1.append(i)
                 list2.append(str1.count(i))
         print("count of all character present in str1:",list2)
         a=max(list2)
         b=list1[list2.index(a)]
         print("Most occuring character in str1:",(a,b))
```

```
count of all character present in str1: [2, 3, 1, 1, 1, 2, 1, 1, 1]
Most occuring character in str1: (3, 'a')
```

16.Python Program to Find the sum of even factors of a number

```
In [13]: def even_fact(n):
             even_fact=0
             for i in range(1,n+1):
                 if i%2==0:
                     even_fact+=i
             return even_fact
         n=int(input("enter the number:"))
         print("sum of even_fact:",even_fact(n))
```

```
enter the number:10
sum of even_fact: 30
```

17.Python Program to Check if all digits of a number divide it

```
In [10]: def digit_div(num):
             str_num=str(num)
             digit=[]
             for i in str_num:
                 digit.append(int(i))
             print(digit)
             div_list=[]
             for j in digit:
                 if j==0:
                     div_list.append(0)
                 else:
                     if num%j==0:
                         div_list.append(1)
                     else:
                         div_list.append(0)
             if all(div_list):
                 print('yes')
             else:
                 print("No")
         digit_div(30)
         digit_div(122)
```

```
[3, 0]
No
[1, 2, 2]
yes
```

18.Python program to convert float decimal to Octal number

19.Python program to copy odd lines of one file to other

```
In [12]:  def odd_line(s):
              new=[]
              l=s.split()
              for i in range(len(l)):
                  if i%2!=0:
                      new.append(l[i])
              print(' '.join(new))
          s='i am learning ml'
          odd_line(s)
```

```
am ml
```

20.Write a Python program to replace whitespaces with an underscore and vice versa

```
In [15]:  str1="Write a Python_program to replace_whitespaces with_an underscore and vice v
          str2=str1.replace(" ","*").replace("_"," ").replace("*","_")
          print(str2)
```

```
Write_a_Python program_to_replace whitespaces_with an_underscore_and_vice_versa
```

21.Write a Python program to convert a date or yyyy-mm-dd format to dd-mm-yyyy

```
In [16]:  from datetime import datetime
          def date(date):
              current_date=datetime.today()
              new_date=current_date.strftime("%d-%m-%Y")
              return new_date
          date(date)
```

```
Out[16]:  '26-07-2022'
```

22.Write a Python program to find all words starting with 'a' or 'e' in a given string.

```
In [17]:  string="i am learning python and using excel"
          s=string.split()
          list1=[]
          for i in s:
              if i.startswith("a") or i.startswith("e"):
                  list1.append(i)
          print(list1)
```

```
['am', 'and', 'excel']
```

23.Write a Python program to abbreviate 'Road' as 'Rd.' in a given string

In [18]:
```python
def abb(s):
    return s.replace("Road","Rd.")
s="Royal Gardenia Road"
abb(s)
```

Out[18]: 'Royal Gardenia Rd.'

In [ ]: