Python Programming Assignment-1

1. Write a program that takes two numbers as input and prints their sum.

In [78]:
```
a=int(input("Enter the first number: "))
b=int(input("Enter the second number: "))
print("The sum of ",a," and ",b," is ",a+b)
```

```
The sum of  36  and  57  is  93
```

2. Write a python program that checks whether a given number is even or odd.

In [79]:
```
n=int(input("Enter the number: "))
if n%2==0:
    print(n, "is even.")
else:
    print(n, "is odd.")
```

```
49 is odd.
```

3. Write a python program that calculates the factorial of a given number.

In [80]:
```
n=int(input("Enter the number: "))
c=1
for i in range(1,n+1):
    c*=i
print("factorial is: ", c)
```

```
factorial is:  40320
```

4. Write a program that asks the user for their name and then prints a greeting message.

In [81]:
```
s=input("Enter your name: ")
print("Hello", s)
```

```
Hello Vanshikaa Sharma
```

5. Write a program that takes a string input from the user and writes it to a text file.

In [82]:
```
s=input("Enter a string: ")
file=open("C:\\Users\\ivans\\OneDrive\\Desktop\\UNI\\pyth ML\\file.txt","w")
file.write(s)
file.close()
```

6. Write a program that reads the content of a text file and prints it to the console.

In [83]:
```
fr=open("C:\\Users\\ivans\\OneDrive\\Desktop\\UNI\\pyth ML\\file.txt")
s=fr.read()
print(s)
```

```
Hello World. This is a sample text I'm giving.
```

7. Write a python program that takes a string as input and returns its length.

In [84]:
```
s=input("Enter a string: ")
print("Length of the string is: ", len(s))
```

```
Length of the string is:  19
```

8. Write a python program that concatenates two strings and returns the result.

In [85]:
```
s1=input("Enter first string: ")
s2=input("Enter second string: ")
print("After concatenation, the resultant string will be: ", s1+s2)
```

```
After concatenation, the resultant string will be:  helloworld
```

9. Write a python program that checks if a substring is present in a given string.

In [86]:
```
main=input("Enter the main string: ")
sub=input("Enter the substring: ")
if sub in main:
    print("Yes, the substring is present.")
else:
    print("No, the substring isn't present.")
```

```
Yes, the substring is present.
```

10. Write a python program that converts a given string to uppercase.

In [87]:
```
s=input("Enter a string: ")
s2=s.upper()
print("Given string in uppercase: ",s2)
```

```
Given string in uppercase:  HE IS A GREAT SPORTSPERSON
```

11. Write a python program that generates the first n numbers in the Fibonacci sequence.

In [88]:
```
n=int(input("Enter a number: "))
a=0
b=1
print("Fibonacci Series: ",a,b,end=" ")
for i in range(n-2):
    c=a+b
    a=b
    b=c
    print(c, end=" ")
```

```
Fibonacci Series:  0 1 1 2 3 5 8 13 21 34 55 89 144 233 377
```

12. Write a python program that calculates the sum of the digits of a given number.

In [89]:
```
n=int(input("Enter a number: "))
c=0
for i in str(n):
    c+=int(i)
print("Sum of the digits: ", c)
```

```
Sum of the digits:  29
```

13. Write a program that asks the user for their birth year and calculates their age.

In [90]:
```
year=int(input("Enter your birth year: "))
age=2024-year
```

```
print("Your age is: ", age)
```

```
Your age is:  20
```

14. Write a program that reads multiple lines of input from the user until they enter an empty line, then prints all the lines.

In [91]:
```
flag=True
final=""
while flag:
    s=input("Enter line: ")
    if s=="":
        flag=False
    else:
        final+=s+'\n'
print("Lines read:", final, sep="\n")
```

```
Lines read:
Hello World
My name is Vanshika Sharma
I'm studying in IGDTUW
See you soon.
```

15. Write a program that reads data from a CSV file and prints it to the console.

In [92]:
```
import csv
file=open("C:\\Users\\ivans\\OneDrive\\Desktop\\UNI\\DATA SCIENCE\\file.csv")
r=csv.reader(file)
for i in r:
    print(i)
```

```
['', 'name', 'class', 'city']
['0', 'Vanshika', '12', 'Mumbai']
['1', 'Falguni', '11', 'Delhi']
['2', 'Anshit', '12', 'Nagpur']
['3', 'Harry', '10', 'Kolkata']
```

16. Write a program in python that counts the frequency of each character in a string.

In [93]:
```
s=input("Enter a string: ")
d={}
for i in s:
    if i in d:
        d[i]+=1
    else:
        d[i]=1
print("Frequency of each character is as follows: ")
for j in d:
    print("Frequency of ",j," is ",d[j])
```

```
Frequency of each character is as follows:
Frequency of  s  is  5
Frequency of  h  is  4
Frequency of  i  is  2
Frequency of  l  is  2
Frequency of  p  is  3
Frequency of  a  is  1
Frequency of     is  4
Frequency of  e  is  5
Frequency of  w  is  1
Frequency of  t  is  2
```

17. Write a program in python that converts a given string to title case (first letter of each word capitalized).

In [94]:
```
s=input("Enter a string: ")
print("Tile case: ", s.title())
```

```
Tile case:  Nice To See You
```

18. Write a python program that checks if two strings are anagrams of each other.

In [95]:
```
s1=input("Enter first string: ")
s2=input("Enter second string: ")
print(sorted(s1)==sorted(s2))
```

```
True
```

19. Write a python program that removes all punctuation from a given string.

In [96]:
```
import string

s=input("Enter a string: ")
s1=""
for i in s:
    if i not in string.punctuation:
        s1+=i
print(s1)
```

```
Hello How are you doing today I hope everything is going well Have a great day
```

20. Write a python program that takes a list of numbers and returns their sum.

In [97]:
```
l=eval(input("Enter the list of nos.: "))
c=0
for i in l:
    c+=i
print("Sum: ",c)
```

```
Sum:  305
```

21. Write a python program that counts the occurrences of a specific element in a list.

In [98]:
```
l=eval(input("Enter the list: "))
el=int(input("Enter the element: "))
c=0
for i in l:
    if i==el:
        c+=1
print("Number of occurences: ",c)
```

```
Number of occurences:  3
```

22. Write a python program that returns the minimum and maximum values in a list of numbers.

In [99]:
```
l=eval(input("Enter a list of numbers: "))
min=l[0]
max=l[0]
for i in l:
    if min>i:
        min=i
    if max<i:
        max=i
print("Minimum value: ", min)
print("Maximum value: ", max)
```

```
Minimum value:  7
Maximum value:  90
```

23. Write a program that converts temperature from Celsius to Fahrenheit and vice versa based on user input.

In [100…
```
temp=int(input("Enter the temperature: "))
unit=input("Enter the unit(C/F): ")
if unit=='C':
    f=(9*temp/5)+32
    print("Temperature in Fahrenheit: ", f)
elif unit=='F':
    c=(temp-32)*5/9
    print("Temperature in Celsius: ", c)
else:
    print("Enter correct unit!")
```

```
Temperature in Celsius:  31.666666666666668
```

24. Write a program that acts as a simple calculator. It should take two numbers and an operator (+, -, *, /) as input and print the result.

In [101…
```
n1=int(input("Enter the first number"))
n2=int(input("Enter the second number"))
op=input("Enter the operator: ")
if op=="+":
    print("Sum: ",n1+n2)
elif op=="-":
    print("Difference: ",n1-n2)
elif op=="*":
    print("Product: ",n1*n2)
elif op=="/":
    print("Quotient: ",n1//n2)
    print("Remainder: ",n1%n2)
else:
    print("Wrong operator")
```

```
Quotient:  60
Remainder:  13
```

25. Write a program that copies the contents of one text file to another.

In [102…
```
f1=open("C:\\Users\\ivans\\OneDrive\\Desktop\\UNI\\pyth ML\\file.txt")
f2=open("C:\\Users\\ivans\\OneDrive\\Desktop\\UNI\\pyth ML\\file.txt","w")
s=f1.read()
f2.write(s)
```

Out[102…
```
0
```

26. Write a program in python that checks if a string starts with a given prefix or ends with a given suffix.

In [103…
```
s=input("Enter a string: ")
pre=input("prefix: ")
suf=input("suffix: ")
if s.startswith(pre):
    print("string starts with a given prefix ",pre)
if s.endswith(suf):
    print("string starts with a given suffix ",suf)
```

```
string starts with a given suffix  ed
```

27. Write a program in python that converts a string into a list of its characters.

In [104…
```
s=input("Enter a string: ")
l=list(s)
print("List created: ",l)
```

```
List created:  ['h', 'e', 'l', 'l', 'o']
```

In [ ]:
```
```