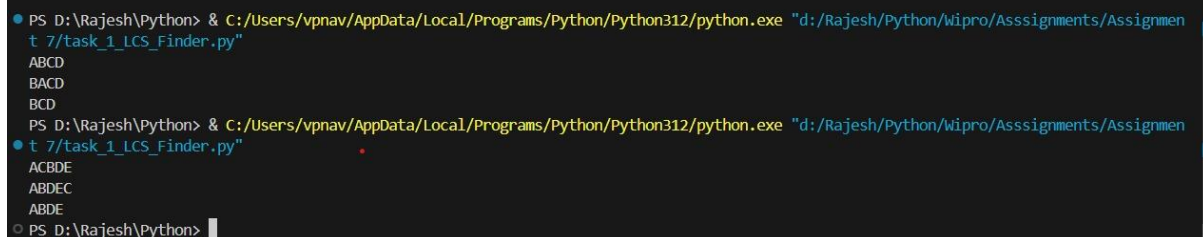


Task_1_ LCS Finder

```
def longest_common_subsequence(name1, name2):
    m = len(name1)
    n = len(name2)
    lcs_matrix = [[0] * (n + 1) for _ in range(m + 1)]
    for i in range(1, m + 1):
        for j in range(1, n + 1):
            if name1[i - 1] == name2[j - 1]:
                lcs_matrix[i][j] = lcs_matrix[i - 1][j - 1] + 1
            else:
                lcs_matrix[i][j] = max(lcs_matrix[i - 1][j], lcs_matrix[i][j - 1])
    lcs = ""
    i = m
    j = n
    while i > 0 and j > 0:
        if name1[i - 1] == name2[j - 1]:
            lcs = name1[i - 1] + lcs
            i -= 1
            j -= 1
        elif lcs_matrix[i - 1][j] > lcs_matrix[i][j - 1]:
            i -= 1
        else:
            j -= 1
    return lcs
name1 = input()
name2 = input()
lcs = longest_common_subsequence(name1, name2)
print(lcs)
```



```
PS D:\Rajesh\Python> & C:/Users/vpnav/AppData/Local/Programs/Python/Python312/python.exe "d:/Rajesh/Python/wipro/Assignments/Assignmen
t 7/task_1_LCS_Finder.py"
ABCD
BACD
BCD
PS D:\Rajesh\Python> & C:/Users/vpnav/AppData/Local/Programs/Python/Python312/python.exe "d:/Rajesh/Python/wipro/Assignments/Assignmen
t 7/task_1_LCS_Finder.py"
ACBDE
ABDEC
ABDE
PS D:\Rajesh\Python>
```

Task_2_Factors using Class

```
class Factors:
```

```
    def __init__(self, num) -> None:
```

```
        self.num = num
```

```
    def main(self):
```

```
        factors = []
```

```
        for i in range(1, self.num+1):
```

```
            if(self.num % i == 0):
```

```
                factors.append(i)
```

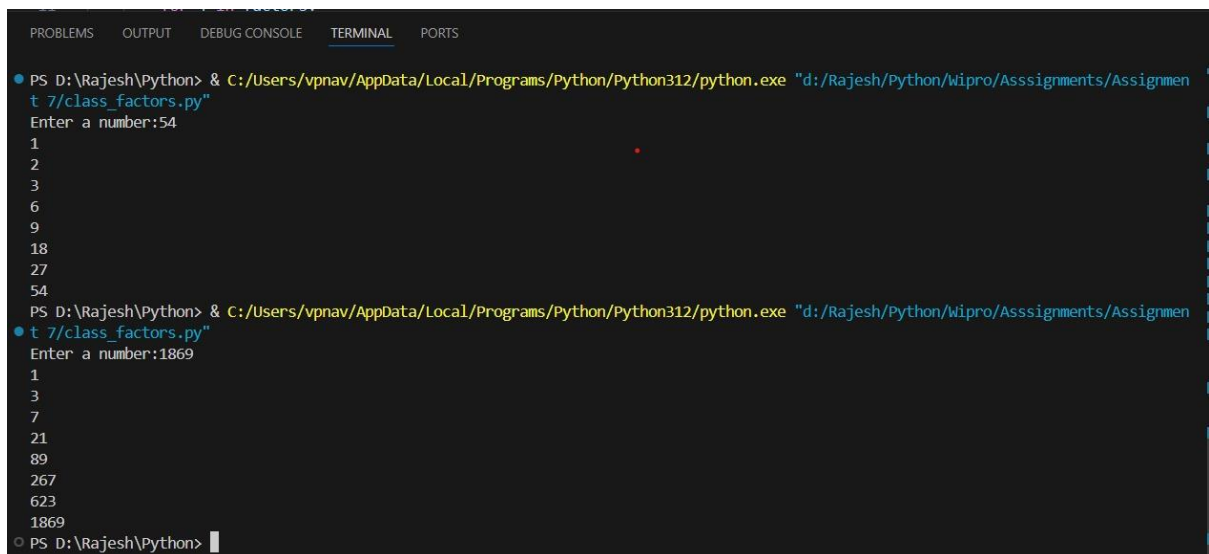
```
        for j in factors:
```

```
            print(j)
```

```
inp = int(input("Enter a number:"))
```

```
myNum = Factors(inp)
```

```
myNum.main()
```



```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
● PS D:\Rajesh\Python> & C:/Users/vpnav/AppData/Local/Programs/Python/Python312/python.exe "d:/Rajesh/Python/wipro/Assignments/Assignmen
t 7/class_factors.py"
Enter a number:54
1
2
3
6
9
18
27
54
PS D:\Rajesh\Python> & C:/Users/vpnav/AppData/Local/Programs/Python/Python312/python.exe "d:/Rajesh/Python/wipro/Assignments/Assignmen
t 7/class_factors.py"
Enter a number:1869
1
3
7
21
89
267
623
1869
○ PS D:\Rajesh\Python>
```