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IDS ASSIGNMENT
PYTHON PRACTICE IN HACKERRANK

Problem#1: If-Else

We have to input an integer n then check whether it is weird or not by using if-else statements.

- If n is odd, it is Weird
- If n is even and in the inclusive range of 2 and 5, it is not weird.
- If n is even and in the inclusive range of 6 and 20, it is weird.
- If n is even and above 20, it is not weird.

```
#!/bin/python3

import math
import os
import random
import re
import sys



if __name__ == '__main__':
    n = int(input().strip())
if n%2!=0:
    print("Weird")
elif n%2 == 0 and 2 <= n <= 6:
    print("Not Weird")
elif n%2 == 0 and 6<=n<=20:
    print("Weird")
elif n%2==0 and n>=20:
    print("Not Weird")
```

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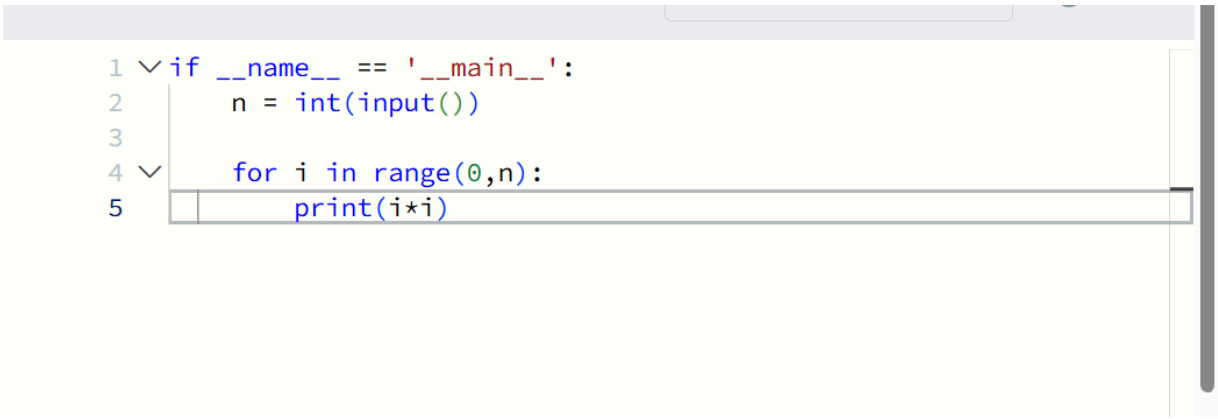
Problem#2: Loops

We have to input an integer from the user and then print square of integers till n using a for loop. Here we used the for loop syntax in which i will iterate from 0 to n-1 and prints the i*i mean it's square.

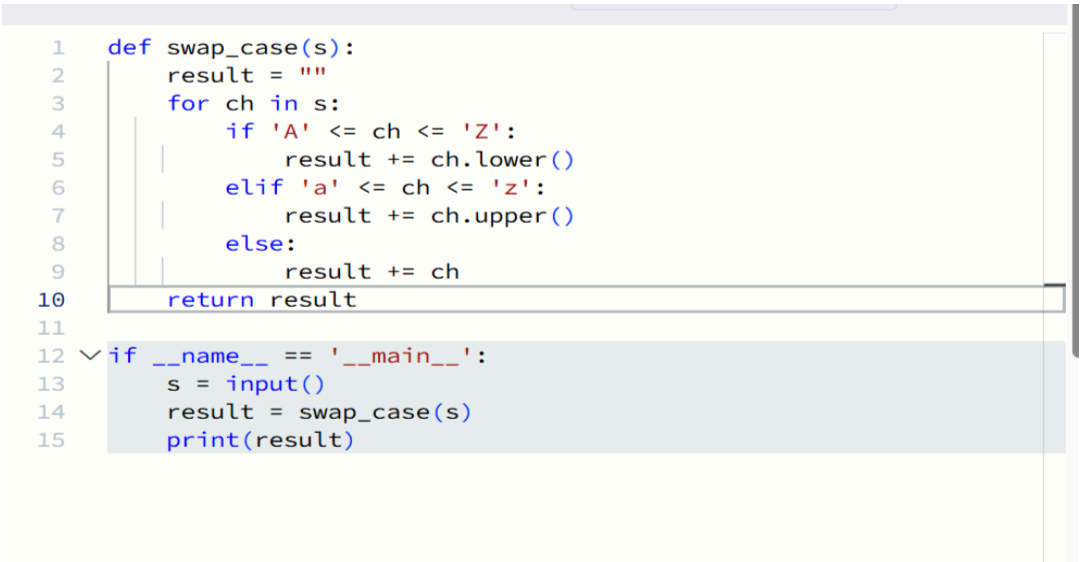


```
if __name__ == '__main__':
    n = int(input())

    for i in range(0,n):
        print(i*i)
```

Problem#03: Swap Case

In this program a string is passed to a function swap_case and then it swap the upper case letters to lower case and lower case to upper case.
By using for loop and if-else conditions we can write code for this problem.
upper() and lower() are the built-in functions which change the cases.

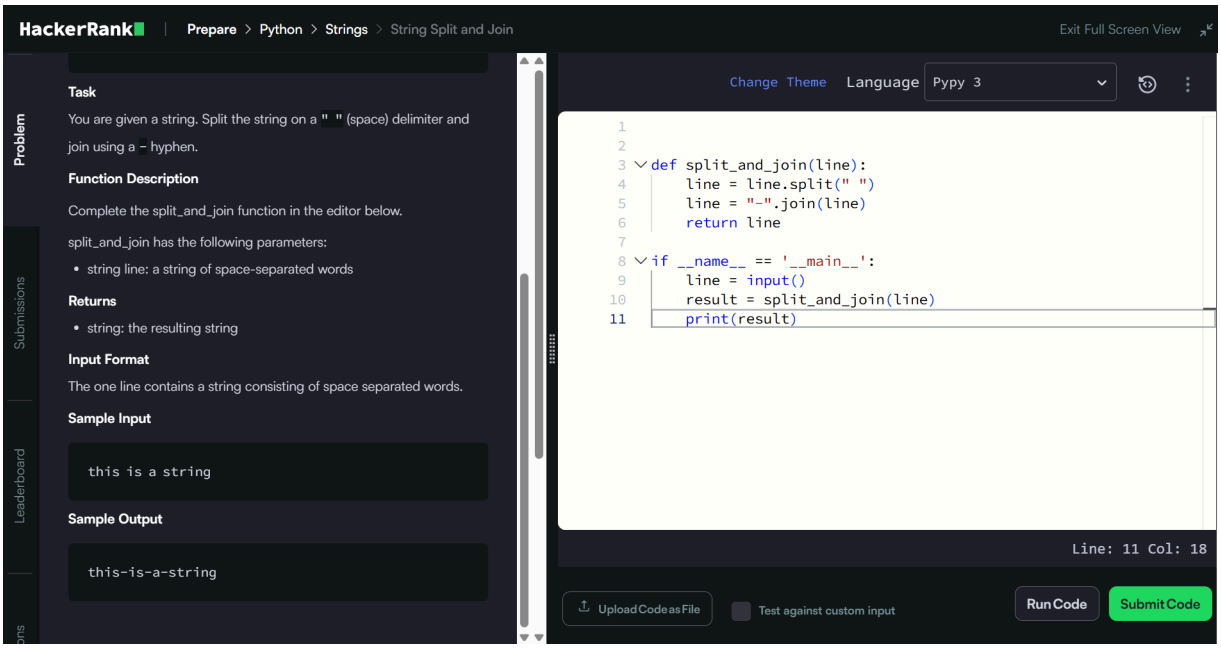


```
def swap_case(s):
    result = ""
    for ch in s:
        if 'A' <= ch <= 'Z':
            result += ch.lower()
        elif 'a' <= ch <= 'z':
            result += ch.upper()
        else:
            result += ch
    return result

if __name__ == '__main__':
    s = input()
    result = swap_case(s)
    print(result)
```

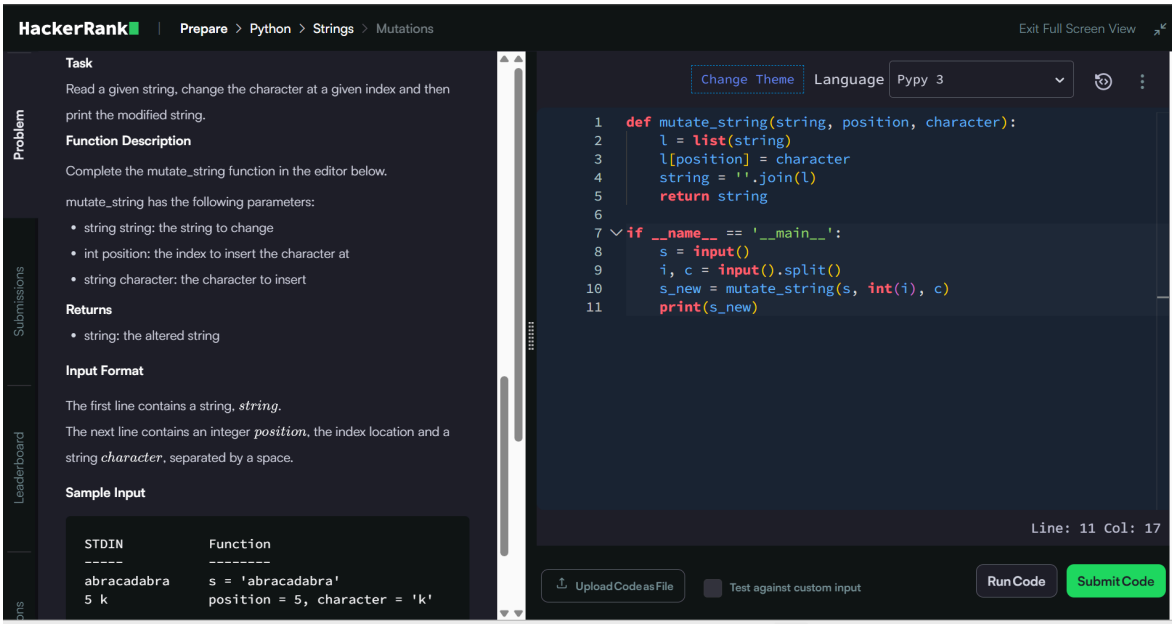
Problem#04: String Split and Join

In this problem, a string is passed to the function ‘split_and_join’. In this function we have to replace space with ‘-’. But as String is immutable so we cannot make changes in the string directly. So with the help of a list we can make it possible. Split() and join() are the built-in functions in python specially made for this purpose. Firstly we have to split, which means changing the string to the list. And then we will use “-”.join(line) to change back to string but with ‘-’.



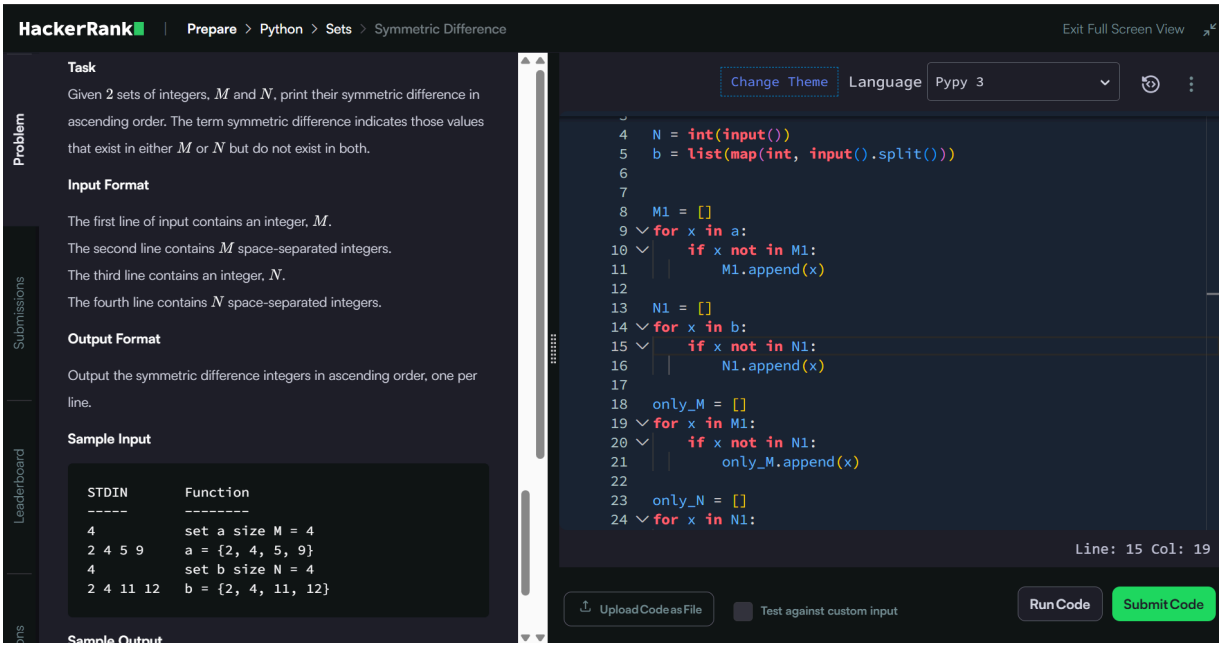
Problem#05: Mutations

In this problem, we have to change the character from the given string and then print the modified string. As string is immutable so we will use list to solve this problem. First we will convert the string to list then put the character in the required position. And use the function join to again change into the string. Return the modified string.



Problem#06: Symmetric Difference

In this program we have to find the non common elements in the two sets and display it in ascending order.
Here we will use the append function that adds the element at the end of the list.
And Sort() function that will sort the list of elements in ascending order.



```
N1 = []
for x in b:
    if x not in N1:
        N1.append(x)

only_M = []
for x in M1:
    if x not in N1:
        only_M.append(x)

only_N = []
for x in N1:
    if x not in M1:
        only_N.append(x)

sym_diff = only_M + only_N
sym_diff.sort()

for x in sym_diff:
    print(x)

```

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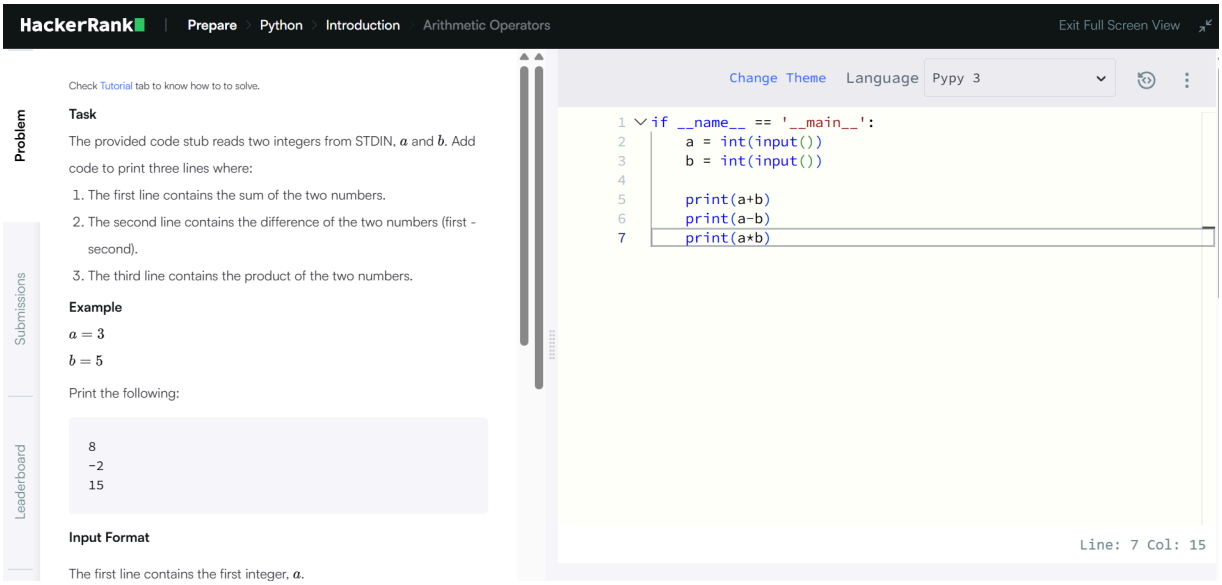
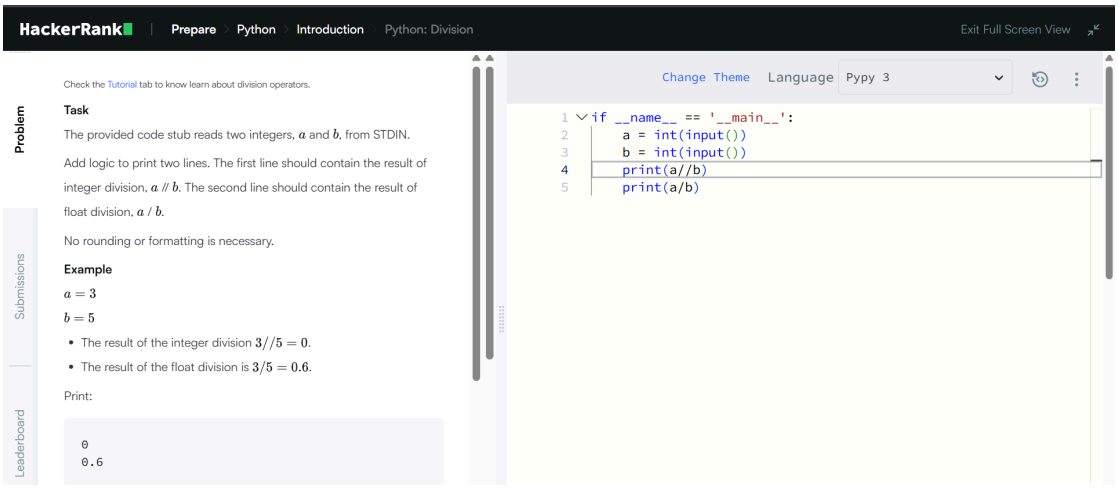
Problem#07: Arithmetic Operators

+,-,* operators are used to compute a and b. Then print the output.



Problem#08: Division

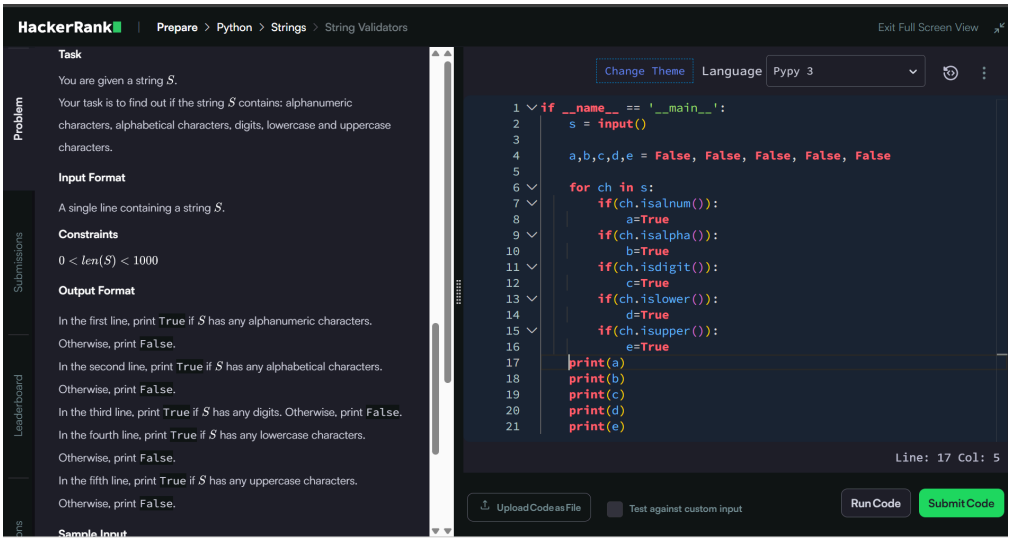
// is used to output int integers and / gives the output in float no matter what their data types are.



Problem#09: String Validators

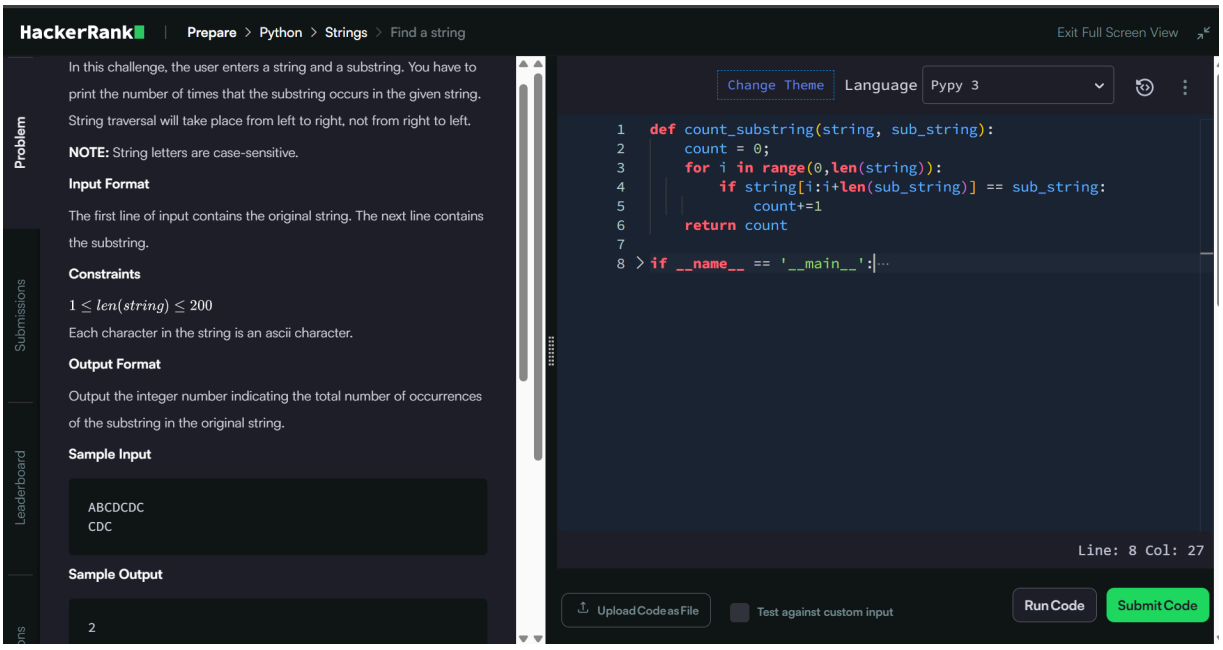
We used these built in functions to check if the string is valid or not and in this base we print True and False.

isalnum() - to check whether string has any alphanumeric characters
isalpha() - to check whether string has any alphabetic characters
isdigit() - to check whether the string has any digit character
isupper() - to check whether the string has any uppercase characters
islower() - to check whether the string has any lowercase characters



Problem#10: Find a string

In this program, we want to find the count of the sub-string in the given string. For this, we will use a loop to iterate through the string and for each iteration we will use the if condition to check whether the sub-string exists in that string or not. If True then count will increase by 1. len(string name) function is used to find the length of a string.

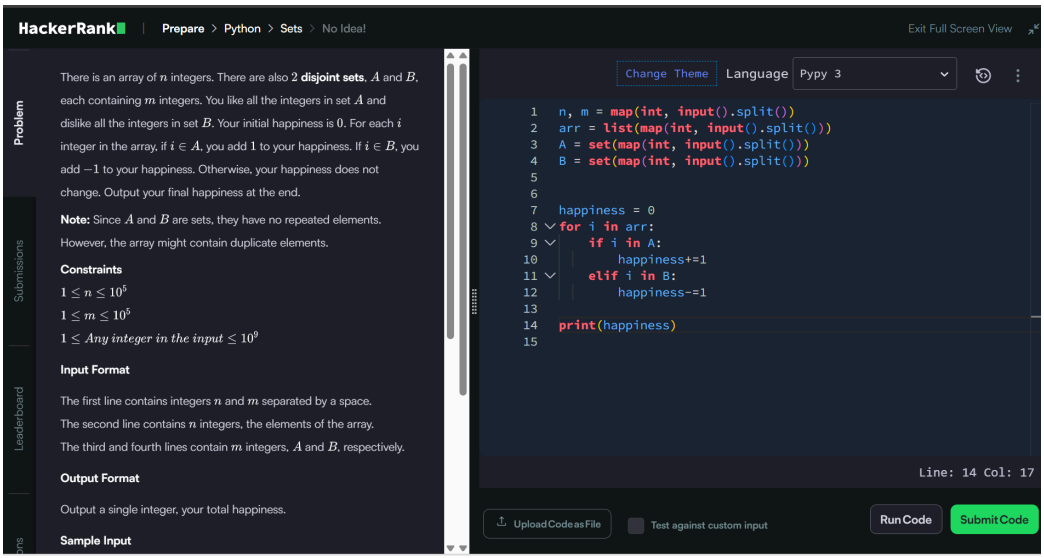


Problem#11: No Idea!

In this program, we are checking what is the count of the happiness

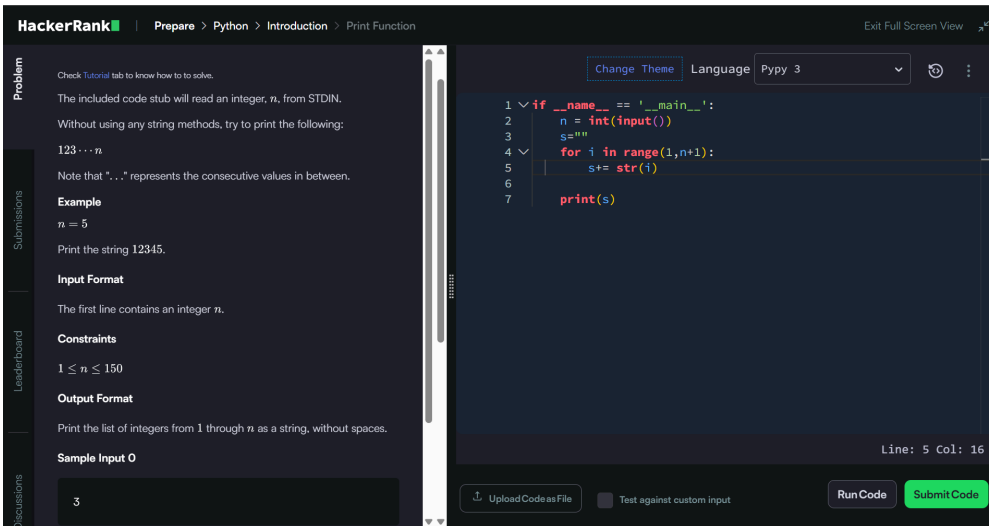
- We are happy if the element in the array is equal to the element in A set.
- We are not happy if the element in the array is equal to the element in B set.

map() converts each string into an integer.
Split() is used to split string by spaces into a list/set of strings.



Problem#12: Print Function

Input a number then print a string having chr 1 to n numbers.
Here str() is used to typecast from int to string.



Problem#13: Find the Runner-Up score

I have to find the runner-up(second largest number). First we find the max value then in each loop iteration use the if condition to check if score != max and score>runner_up.
In this way, we will find the runner-up at the end.