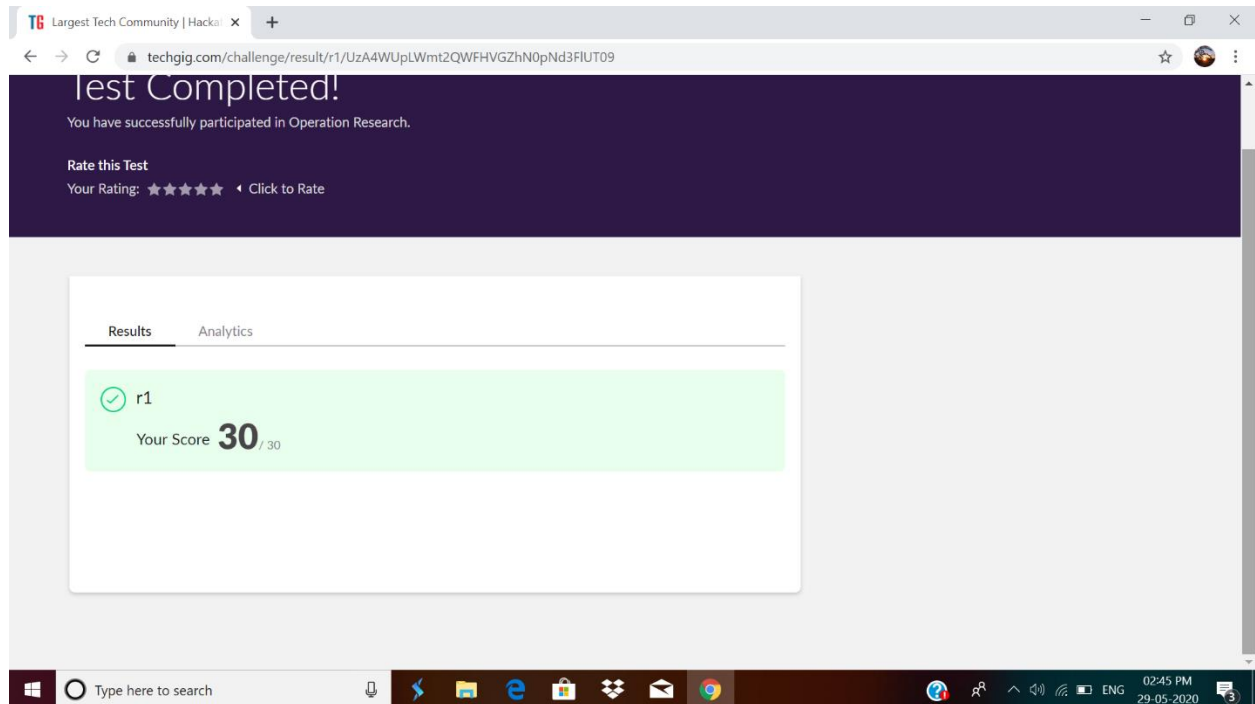


## DAILY ONLINE ACTIVITIES SUMMARY

<b>Date:</b>	29-05-2020	<b>Name:</b>	Anvitha Poojary
<b>Sem &amp; Sec</b>	6A	<b>USN:</b>	4AL17CS008
<b>Online Test Summary</b>			
<b>Subject</b>	OR		
<b>Max. Marks</b>	30	<b>Score</b>	30
<b>Certification Course Summary</b>			
<b>Course</b>	Python for data science		
<b>Certificate Provider</b>	COGNITIVE CLASS .ai	<b>Duration</b>	5hr
<b>Coding Challenges</b>			
<b>Problem Statement:</b> <ol style="list-style-type: none"><li>1. Python program to calculate the number of lowercase and uppercase letters in a string</li><li>2. We are given 3 strings: str1, str2, and str3. Str3 is said to be a shuffle of str1 and str2 if it can be formed by interleaving the characters of str1 and str2 in a way that maintains the left to right ordering of the characters from each string.</li><li>3. Write a c program to solve a system of linear congruences by applying the Chinese Remainder Theorem.</li></ol>			
<b>Status: completed</b>			
<b>Uploaded the report in Github</b>		Yes	
<b>If yes Repository name</b>		<a href="https://github.com/anvithapo99/Daily-Report">https://github.com/anvithapo99/Daily-Report</a>	
<b>Uploaded the report in slack</b>		Yes	

## Online test details:

### Subject: OR



## Certification course details:

### Python for data science

Today I have studied following topics:

- Expression and variable
- String operation
- Types

➤ Some programs

The screenshot displays a web browser window with the URL `https://labs.cognitiveclass.ai/tool/` and a sub-page `courses.cognitiveclass.ai/courses/course-v1:Cognitiveclass+PY0101EN+v2/progress`. The page is titled "Welcome to Python 101 for Data Science! (2:28)" and shows a progress bar with segments labeled "RQ C", "RQ C", "RQ C", "RQ C", "RQ C", "RQ A", "Fin", and "Tot". The main content area is divided into two columns. The left column contains "Welcome!" and "About this course". The right column lists sections: "General Information", "Learning Objectives", "Syllabus", "Grading Scheme", and "Copyrights and Trademarks", each with a "No problem scores in this section" message. Below this, the "Module 1 - Python Basics" section is shown, containing "Learning Objectives", "Your First Program (1:15) (2/2) 100%", "Types (2:57) (2/2) 100%", "Expressions and Variables (3:50)", "Lab - Write your first Python code!", "String Operations (3:53) (2/2) 100%", and "Lab - String Operations". The Windows taskbar at the bottom shows the search bar, task view, and various application icons, with the system clock indicating 11:51 AM on 29-05-2020.

Python 101EN Progress | Cognitive C x `https://labs.cognitiveclass.ai/tool/` x +

← → ↻ `courses.cognitiveclass.ai/courses/course-v1:Cognitiveclass+PY0101EN+v2/progress` ★

RQ C RQ C RQ C RQ C RQ C RQ A Fin Tot

Welcome! **Welcome to Python 101 for Data Science! (2:28)**  
No problem scores in this section

About this course **General Information**  
No problem scores in this section

**Learning Objectives**  
No problem scores in this section

**Syllabus**  
No problem scores in this section

**Grading Scheme**  
No problem scores in this section

**Copyrights and Trademarks**  
No problem scores in this section

Module 1 - Python Basics **Learning Objectives**  
No problem scores in this section

**Your First Program (1:15) (2/2) 100%**  
Practice Scores: 1/1 1/1

**Types (2:57) (2/2) 100%**  
Practice Scores: 1/1 1/1

**Expressions and Variables (3:50)**  
No problem scores in this section

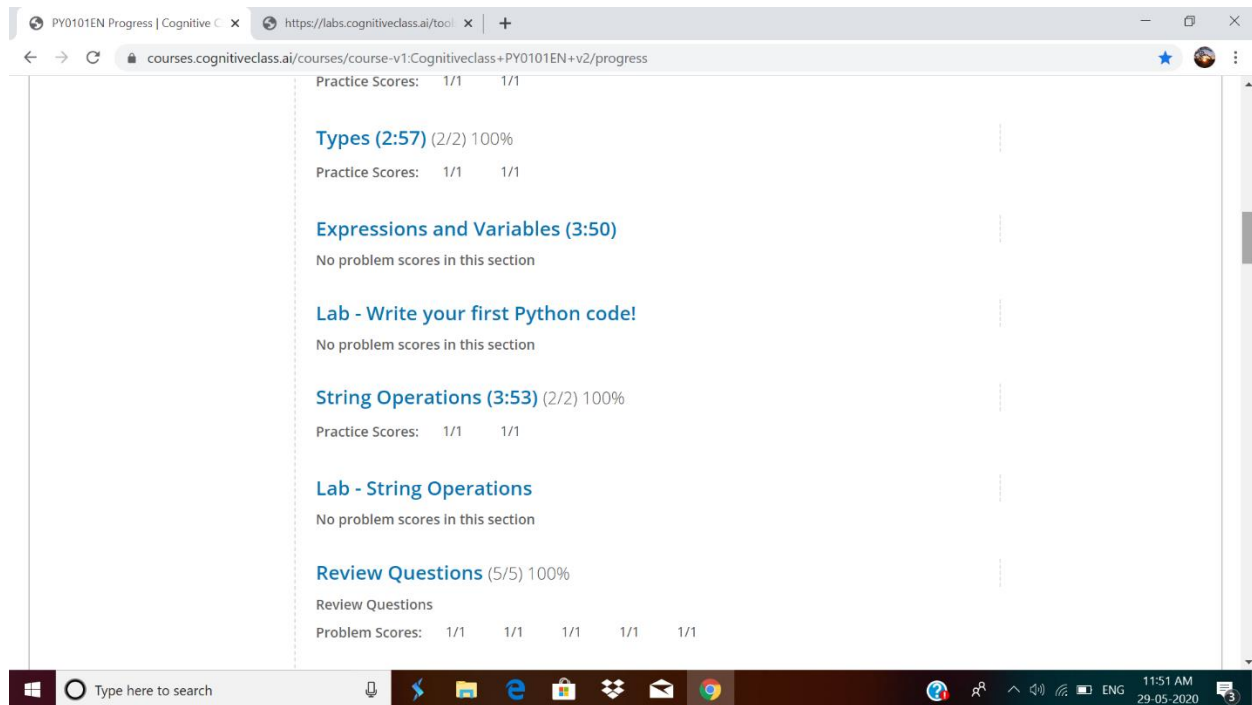
**Lab - Write your first Python code!**  
No problem scores in this section

**String Operations (3:53) (2/2) 100%**  
Practice Scores: 1/1 1/1

**Lab - String Operations**  
No problem scores in this section

Type here to search

11:51 AM 29-05-2020



## Coding Challenges Details:

1. Python program to calculate the number of lowercase and uppercase letters in a string

Description:

Take a string as input and find the number of uppercase and lower case letters in the string and print the count.

Note: any spaces has to be ignored

Eg: string is : 'This is Python'

Upper case characters : 2

Lower case characters : 10

```
string=input("Enter string:")
```

```
count1=0
```

```
count2=0
```

```
for i in string:
```

```
    if(i.islower()):
```

```
        count1=count1+1
```

```

elif(i.isupper()):

    count2=count2+1

print("The number of lowercase characters is:")

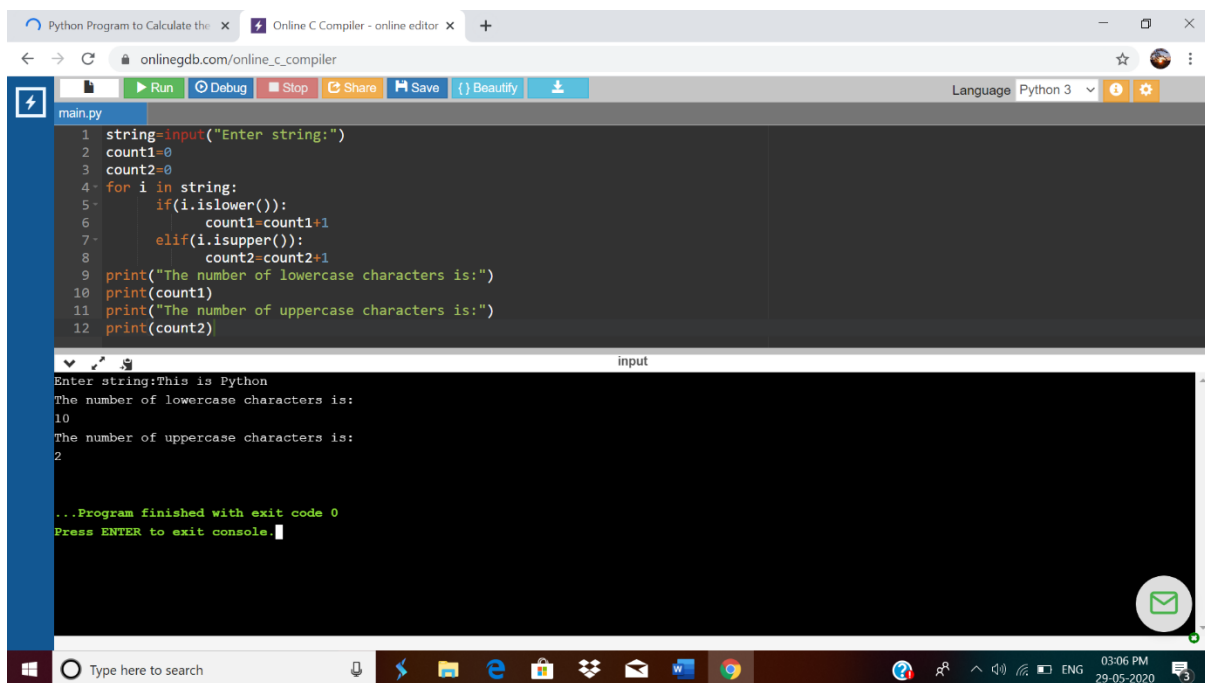
print(count1)

print("The number of uppercase characters is:")

print(count2)

```

**output:**



The screenshot shows a web browser window with the URL `onlinegdb.com/online_c_compiler`. The browser tabs include "Python Program to Calculate the..." and "Online C Compiler - online editor". The editor shows a Python script in `main.py` that takes a string input and counts its lowercase and uppercase characters. The output console shows the program's execution with the input "This is Python" and the resulting counts: 10 lowercase characters and 2 uppercase characters. The program finished with exit code 0.

```

main.py
1 string=input("Enter string:")
2 count1=0
3 count2=0
4 for i in string:
5     if(i.islower()):
6         count1=count1+1
7     elif(i.isupper()):
8         count2=count2+1
9 print("The number of lowercase characters is:")
10 print(count1)
11 print("The number of uppercase characters is:")
12 print(count2)

input
Enter string:This is Python
The number of lowercase characters is:
10
The number of uppercase characters is:
2

...Program finished with exit code 0
Press ENTER to exit console.

```

2. We are given 3 strings: str1, str2, and str3. Str3 is said to be a shuffle of str1 and str2 if it can be formed by interleaving the characters of str1 and str2 in a way that maintains the left to right ordering of the characters from each string. For example, given str1="abc" and str2="def", str3="dabecf" is a valid shuffle since it preserves the character ordering of the two strings. So, given these 3 strings write a function that detects whether str3 is a valid shuffle of str1 and str2.

```

public class Main{

    static boolean isInterleaved (String A, String B, String C)

```

```

{
    int i = 0, j = 0, k = 0;
    while (k != C.length())
    {
        if (i < A.length() && A.charAt(i) == C.charAt(k))
            i++;
        else if (j < B.length() && B.charAt(j) == C.charAt(k))
            j++;
        else
            return false;
        k++;
    }
    if (i < A.length() || j < B.length())
        return false;

    return true;
}

```

```

public static void main(String []args){

    String A = "abc";
    String B = "def";
    String C = "dabecf";
    if (isInterleaved(A, B, C) == true)

        System.out.printf("%s is interleaved of %s and %s", C, A, B);
}

```

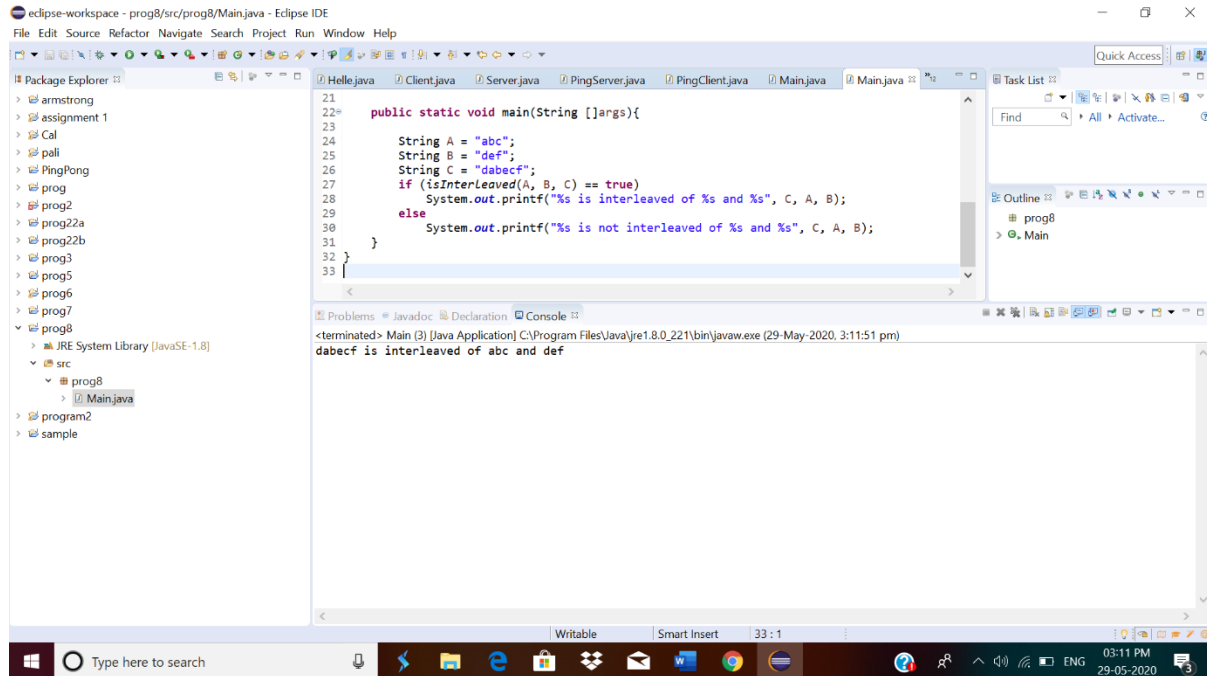
else

```
System.out.printf("%s is not interleaved of %s and %s", C, A, B);
```

```
}
```

```
}
```

### Output:



3. Write a c program to solve a system of linear congruences by applying the Chinese Remainder Theorem.

```
#include <stdio.h>
```

```
int mul_inv(int a, int b)
```

```
{
```

```
    int b0 = b, t, q;
```

```
    int x0 = 0, x1 = 1;
```

```
    if (b == 1) return 1;
```

```

while (a > 1) {
    q = a / b;
    t = b, b = a % b, a = t;
    t = x0, x0 = x1 - q * x0, x1 = t;
}
if (x1 < 0) x1 += b0;
return x1;
}

```

```

int chinese_remainder(int *n, int *a, int len)
{
    int p, i, prod = 1, sum = 0;

    for (i = 0; i < len; i++) prod *= n[i];

    for (i = 0; i < len; i++) {
        p = prod / n[i];
        sum += a[i] * mul_inv(p, n[i]) * p;
    }

    return sum % prod;
}

```

```

int main(void)
{

```



```
int n[] = { 3, 5, 7 };

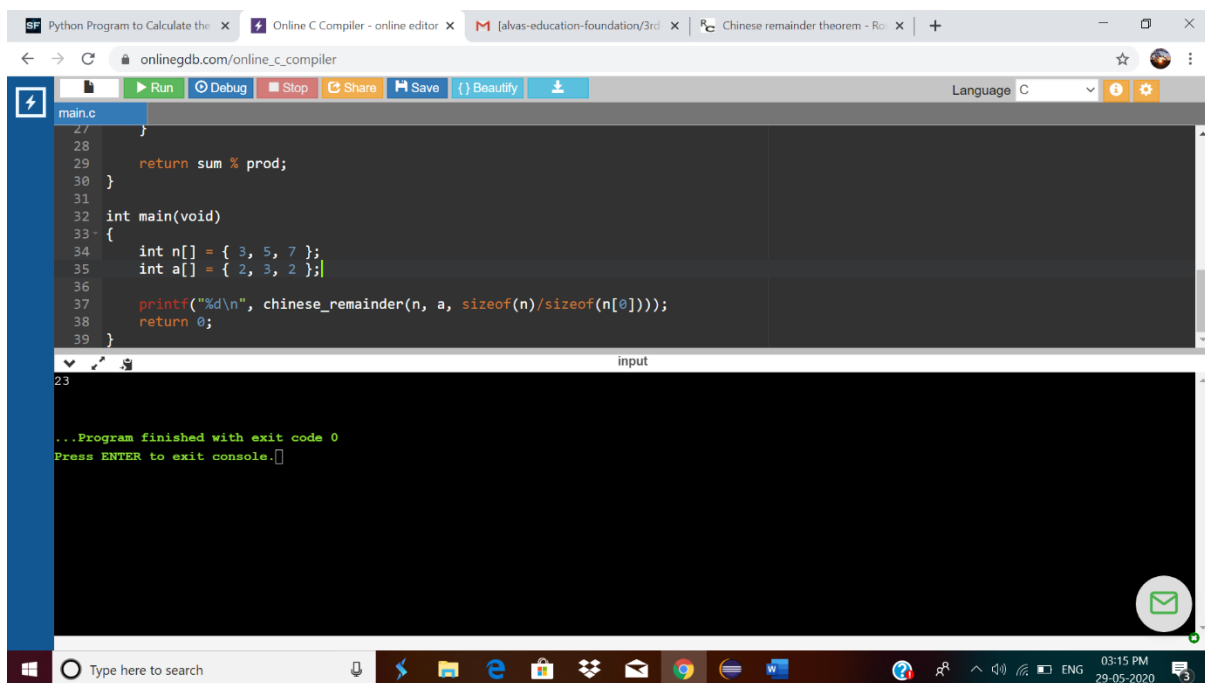
int a[] = { 2, 3, 2 };


printf("%d\n", chinese_remainder(n, a, sizeof(n)/sizeof(n[0])));

return 0;

}
```

Output:



The screenshot shows a web browser window with the URL `onlinegdb.com/online_c_compiler`. The browser tabs include "Python Program to Calculate the...", "Online C Compiler - online editor", "[alvas-education-foundation/3rd", and "Chinese remainder theorem - Ro...". The online compiler interface has a top bar with buttons for "Run", "Debug", "Stop", "Share", "Save", and "Beautify". The language is set to "C". The code editor shows the following C code:

```
main.c
27
28
29     return sum % prod;
30 }
31
32 int main(void)
33 {
34     int n[] = { 3, 5, 7 };
35     int a[] = { 2, 3, 2 };
36
37     printf("%d\n", chinese_remainder(n, a, sizeof(n)/sizeof(n[0])));
38     return 0;
39 }
```

Below the code editor is an "input" section and a console output area. The console output shows:

```
23
...Program finished with exit code 0
Press ENTER to exit console.
```

The Windows taskbar at the bottom shows the time as 03:15 PM on 29-05-2020.