

''' Question 1. For a given input string “Python is a case sensitive language”. Write python code for the following:

- a. Find the length of the input string.
- b. Reverse the order of the string in one line code.
- c. Using Slice function store “a case sensitive” in new string.
- d. Replace “a case sensitive” with “object oriented”.
- e. Find index of substring “a” in the given input string.
- f. Remove the white spaces from the given input string.'''

# A

```
string='Python is a case sensitive language'
```

```
print(string)
```

```
print(len(string))
```

# B

```
string='Python is a case sensitive language'  
reverse_string=string[::-1]  
print(reverse_string)
```

# C

```
string='Python is a case sensitive language'  
string[9:26]  
print(string[9:26])
```

# D

```
string="Python is a case sensitive language"  
new_string_1= string.replace("a case  
sensitive","object oriented")  
print("String after a replacement :",new_string_1)
```

# E

```
string="Python is a case sensitive language"  
index_a=string.index("a")  
print(index_a)
```

# F

```
string="Python is a case sensitive language"
```

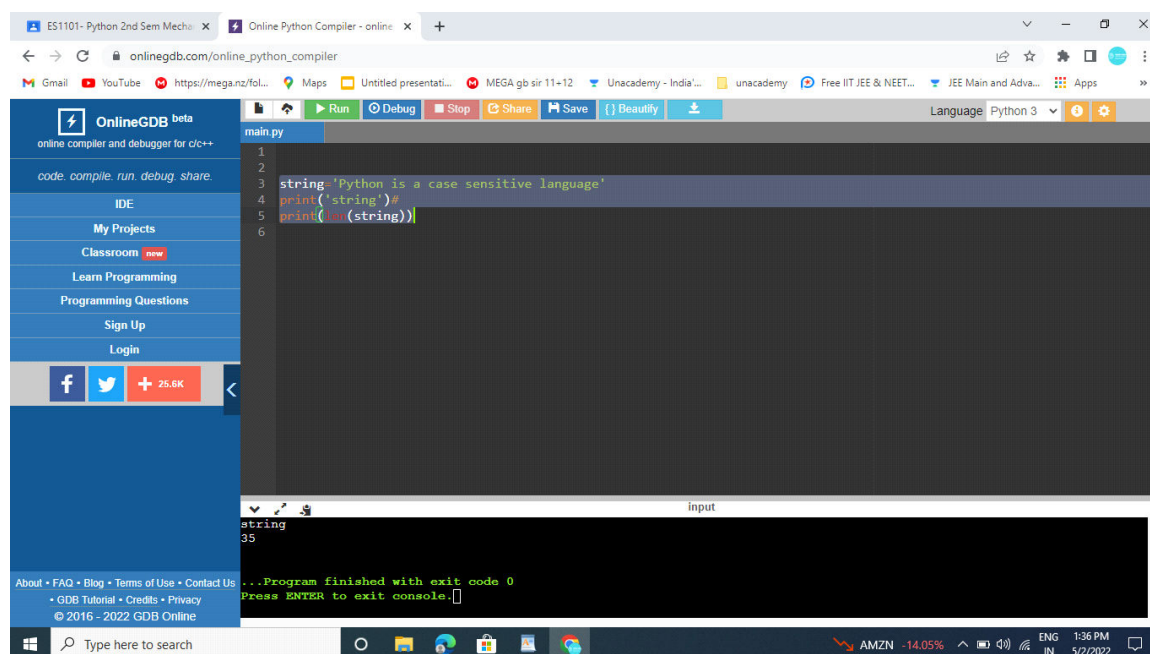
```
newstring=""
```

```
for i in string:
```

```
    if i!=" ":
```

```
        newstring=newstring+i
```

```
print(newstring)
```



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main.py

```
1  
2  
3  
4 string='Python is a case sensitive language'[::-1]  
5 print(string)  
6
```

Language: Python 3

Input

egaugnal evitisnes esac a si nohtyP

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

Type here to search

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main.py

```
1 string='Python is a case sensitive language'  
2 reverse_string=string[::-1]  
3 print(reverse_string)  
4
```

Language: Python 3

Input

egaugnal evitisnes esac a si nohtyP

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

Activate Windows  
Go to Settings to activate Windows.

Type here to search

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```
main.py
1 string="Python is a case sensitive language"
2 string[9:26]
3 print(string[9:26])
4
```

Input  
a case sensitive

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

Activate Windows  
Go to Settings to activate Windows.

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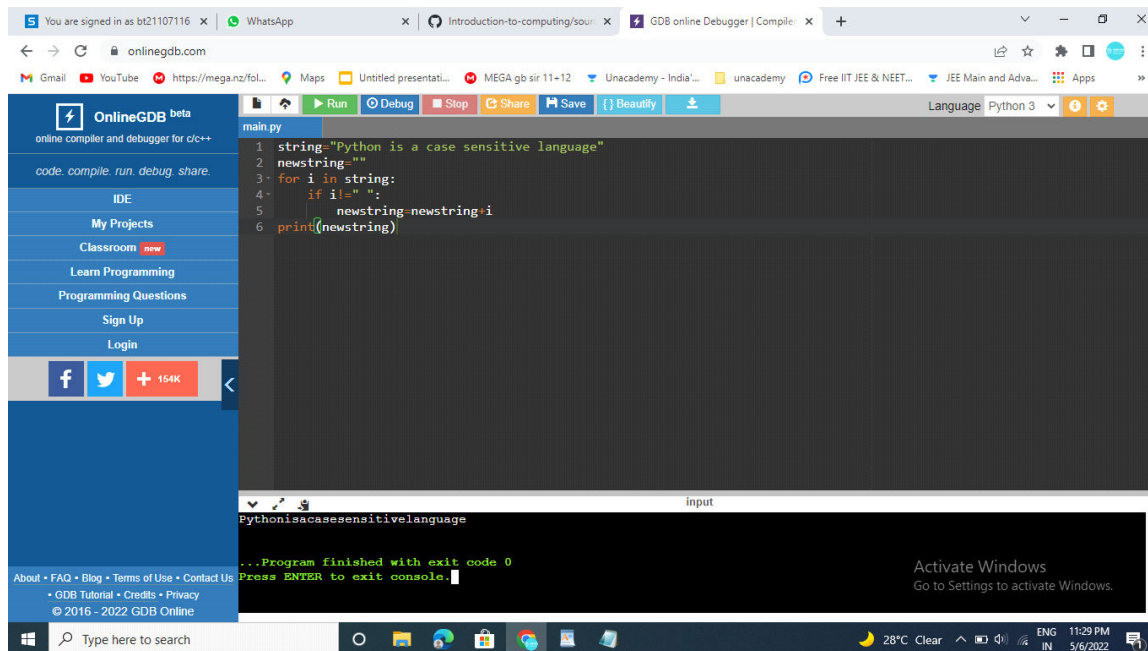
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```
main.py
1 string="Python is a case sensitive language"
2 index_a=string.index("a")
3 print(index_a)
```

Input  
10

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

Activate Windows  
Go to Settings to activate Windows.



## # Question 2

Store your name, SID, department name and CGPA into different variables.

With the help of String formatting print the following output:

Hey, ABC Here!

My SID is 2110XXXX

I am from XYZ department and my CGPA is 9.9

#solution

```
print("                                Program 2")
```

```
name= "Ashish Kumar"
```

```
sid= 21107116
```

```
dept= "Mechanical"
```

```
cgpa= 9.9
```

```
print("Hey,%s here!
```

```
My SID is %d
```

```
I am from %s department and my CGPA is  
%f"%(name ,sid ,dept ,cgpa))
```

```
# Question 3
```

For a=56 and b=10 with the help of bitwise operators calculate the following:

a.  $a \& b$

b.  $a | b$

c.  $a \wedge b$

d. Left shift both a and b with 2 bits.

e. Right shift a with 2 bits and b with 4 bits.

```
# Solution
```

```
print("                                Program 3")
```

#Applying bitwise operators

a=56

b=10

print("a&b: ",a&b)

print("a|b: ",a|b)

print("a^b: ",a^b)

print("a<<2: ",a<<2,"\nb<<2: ",b<<2)

print("a>>2: ",a>>2,"\nb>>4: ",b>>4)

# Question 4

Write a python program to check if the word  
"name" is present in the string  
entered by the user (Print : "Yes" or "No").

# Solution

input\_str= input("Enter a string:\n")

if "name" in input\_str:

    print("Yes")

else:



```
print("No")
```

## # Question 5

For any three lengths, there is a simple test to see if it is possible to form a

triangle. If any of the three lengths is greater than the sum of the other two,

then you cannot form a triangle. Otherwise, Enter three sides of a triangle,

converts them to integers, and to check whether the given input lengths can

form a triangle or not (Print : “Yes” or “No”).[Don’t use if else here].

## # Solutiion

```
a=int(input("enter side 1: "))
```

```
b=int(input("enter side 2: "))
```

```
c=int(input("enter side 3: "))
```

```
l=[a,b,c]
```

```
l.sort()
```

```
while(l[0]+l[1]>l[2]):
```

```
    print("yes")
    break;
while(l[0]+l[1]<=l[2]):
    print("no")
    break;
```

### # Question 6

Given two numbers 'a' and 'b'. Write a program to count number of bits needed to be flipped to convert 'a' to 'b'.

### # Solution

```
a=int(input("enter a"))
b=int(input("enter b"))
x=a^b
count = 0
while x:
    count += 1
    x &= (x-1)
```

