[4]:
```python
#QUESTION 1
s1='Python is a case sensitive language'
print(len(s1))  #a
print(s1[-1::-1]) #b
s2=s1 [10:26]  #c
print(s2)

s3=s1.replace('a case sensitive', 'object oriented')  #d
print(s3)

print(s1.index('a'))  #e
s4=s1.strip().split() #f
s4=''.join(s4)
print(s4)
```

```
35
egaugnal evitisnes esac a si nohtyP
a case sensitive
Python is object oriented language
10
Pythonisacasesensitivelanguage
```

[2]:
```python
# QUESTION 2

name='Subhabrato Pal'
dep_name='Mechanical'
sid=21107009
cgpa=6.9
print('hey,',name,'here!')
print("my sid is", sid)
print('I am from',dep_name,'department and my CGPA is', cgpa)
```

```
hey, Subhabrato Pal here!
my sid is 21107009
I am from Mechanical department and my CGPA is 6.9
```

[ ]:

```python
#QUESTION 3

a=56
b=10
print(a&b)
print(a|b)
print(a^b)
print(a<<2,b<<2)
print(a>>2,b>>4)
```

```
8
58
50
224 40
14 0
```

Q4.py - D:/Q4.py (3.10.4)

File Edit Format Run Options Window Help

```python
#Question 4

string=input()
if 'name' in string:
    print("yes")
else:
        print('no')
```

IDLE Shell 3.10.4

File Edit Shell Debug Options Window Help

```
Python 3.10.4 (tags/v3.10.4:9d38120, Mar 23 2022, 23:13:41) [MSC v.1929
64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
================================ RESTART: D:/Q4.py ========================
========
my name is subhabrato pal
yes
>>>
============================ RESTART: D:/Q4.py ===========================
my sid is 21107009
no
>>>
```

File Edit Format Run Options Window Help

```python
# QUESTION 5

side1=round(float(input('Enter first side : ')))
side2=round(float(input('Enter second side : ')))
side3=round(float(input('Enter third side : ')))
a=side1+side2>side3
b=side2+side3>side1
c=side3+side1>side2
match a,b,c:
    case True,True,True:                # Checking for valid triangle case
        print('Yes')
    case (False,True|False,True|False)|(True,False,True|False)|(True,True,False):        # Checking for invalid triangle case
        print('No')
```

IDLE Shell 3.10.4

File Edit Shell Debug Options Window Help

```
    Python 3.10.4 (tags/v3.10.4:9d38120, Mar 23 2022, 23:13:41) [MSC v.1929 64 bit (AMD64)] on win32
    Type "help", "copyright", "credits" or "license()" for more information.
>>>
    ===================== RESTART: C:\Users\HP\Desktop\Q5.py =====================
    Enter first side : 3
    Enter second side : 4
    Enter third side : 5
    Yes
>>>
    ==================================================== RESTART: C:\Users\HP\Desktop\Q5.py ====
    Enter first side : 5
    Enter second side : 7
    Enter third side : 13
    No
>>>
```

Q6.py - C:\Users\HP\Desktop\Q6.py (3.10.4)

File   Edit   Format   Run   Options   Window   Help

```python
# QUESTION 6

a=int(input())
b=int(input())
c=bin(a^b)
print(c.count('1'))
```

IDLE Shell 3.10.4

File   Edit   Shell   Debug   Options   Window   Help

```
Python 3.10.4 (tags/v3.10.4:9d38120, Mar 23 2022, 23:13:41) [MSC v.1929
64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===================== RESTART: C:\Users\HP\Desktop\Q6.py =============
========
10
20
4
>>>
================== RESTART: C:\Users\HP\Desktop\Q6.py =================
20
50
3
>>>
================== RESTART: C:\Users\HP\Desktop\Q6.py =================
5
9
2
>>>
```