

**Assignment -1**  
Python Programming

Assignment Date	29 September 2022
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Maximum Marks	2 Marks

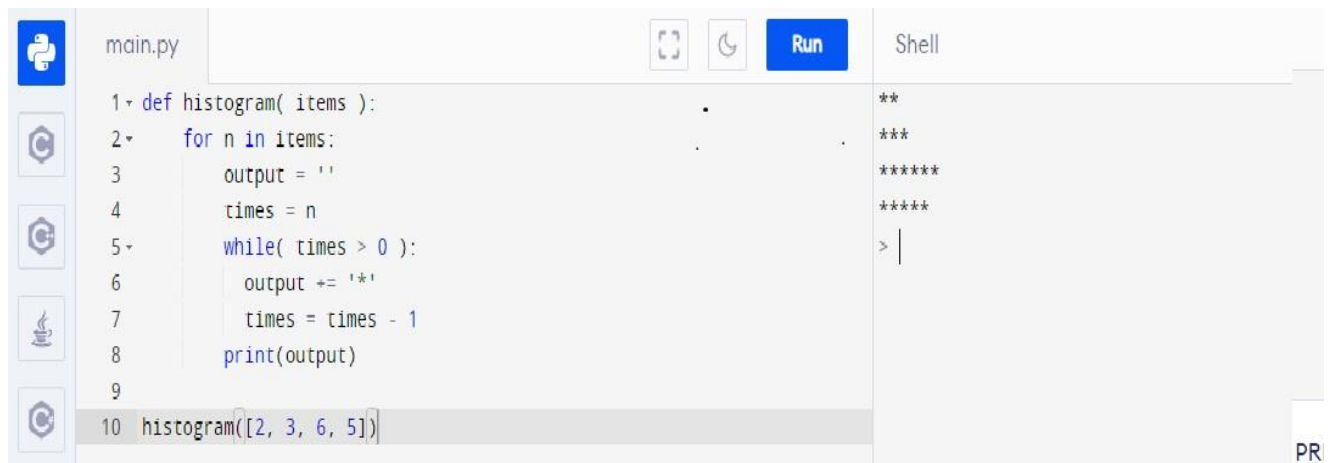
**Question-1:**

Write a Python program to create a histogram from a given list of integers

**Solution:**

```
def histogram(items):
    for n in items:
        output = ''
        times = n
        while( times > 0 ):
            output += '*'
            times = times - 1
        print(output)

histogram([2, 3, 6, 5])
```



The screenshot shows a Python IDE with a file named 'main.py'. The code defines a function 'histogram' that takes a list of integers and prints a histogram for each integer. The function uses a 'for' loop to iterate over the list, and a 'while' loop to print the appropriate number of asterisks for each integer. The function is then called with the list [2, 3, 6, 5]. The output in the shell window shows the histogram for each integer: two asterisks for 2, three for 3, six for 6, and five for 5.

```
main.py
1 def histogram( items ):
2     for n in items:
3         output = ''
4         times = n
5         while( times > 0 ):
6             output += '*'
7             times = times - 1
8         print(output)
9
10 histogram([2, 3, 6, 5])
```

Shell

```
**
***
*****
*****
> |
```

**Question-2:**

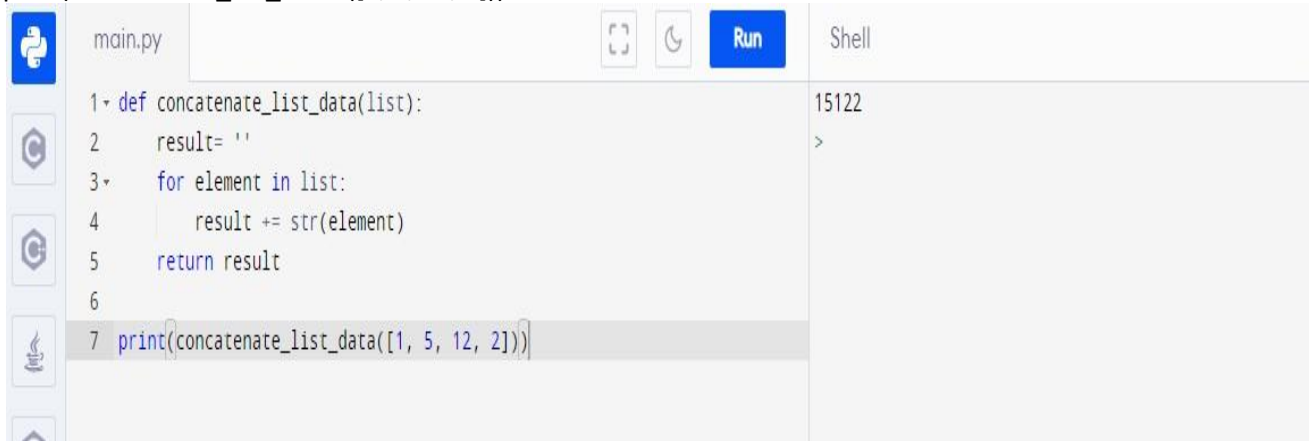
Write a Python program to concatenate all elements in a list into a string and return it.

**Solution:**

```
def concatenate_list_data(list):
    result= ''
```

```
for element in list:
    result += str(element)
return result
```

```
print(concatenate_list_data ([1, 5, 12, 2]))
```



The screenshot shows a Python IDE with a file named 'main.py'. The code defines a function 'concatenate\_list\_data' that takes a list and returns a string of its elements concatenated. The function is then called with the list [1, 5, 12, 2], and the output '15122' is displayed in the Shell window.

```
main.py
1 def concatenate_list_data(list):
2     result= ''
3     for element in list:
4         result += str(element)
5     return result
6
7 print(concatenate_list_data([1, 5, 12, 2]))
```

Shell

```
15122
>
```

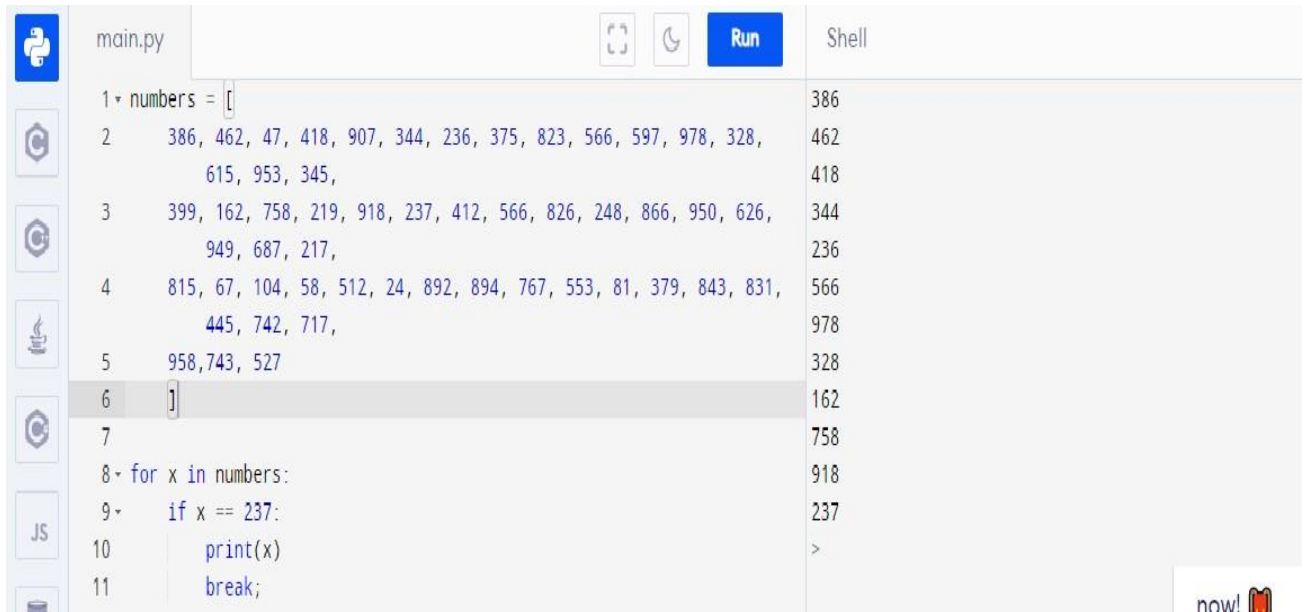
### Question-3:

Write a Python program to print all even numbers from a given numbers list in the same order and stop the printing if any numbers that come after 237 in the sequence

### Solution:

```
numbers = [
    386, 462, 47, 418, 907, 344, 236, 375, 823, 566, 597, 978, 328,
    615, 953, 345,
    399, 162, 758, 219, 918, 237, 412, 566, 826, 248, 866, 950, 626,
    949, 687, 217,
    815, 67, 104, 58, 512, 24, 892, 894, 767, 553, 81, 379, 843,
    831, 445, 742, 717,
    958, 743, 527
]
```

```
for x in numbers:
    if x == 237:
        print(x)
        break;
    elif x % 2 == 0:
        print(x)
```



The screenshot shows a Python IDE with a file named 'main.py'. The code defines a list 'numbers' with 18 elements and a loop that iterates over each element 'x'. The loop prints 'x' if it is equal to 237 and then breaks. The output in the 'Shell' pane shows the first 16 elements of the list, followed by '237' and a prompt '>'. The code is as follows:

```
1 numbers = [  
2     386, 462, 47, 418, 907, 344, 236, 375, 823, 566, 597, 978, 328,  
3     615, 953, 345,  
4     399, 162, 758, 219, 918, 237, 412, 566, 826, 248, 866, 950, 626,  
5     949, 687, 217,  
6     815, 67, 104, 58, 512, 24, 892, 894, 767, 553, 81, 379, 843, 831,  
7     445, 742, 717,  
8     958, 743, 527  
9 ]  
10  
11 for x in numbers:  
12     if x == 237:  
13         print(x)  
14         break;
```

The output in the Shell pane is:

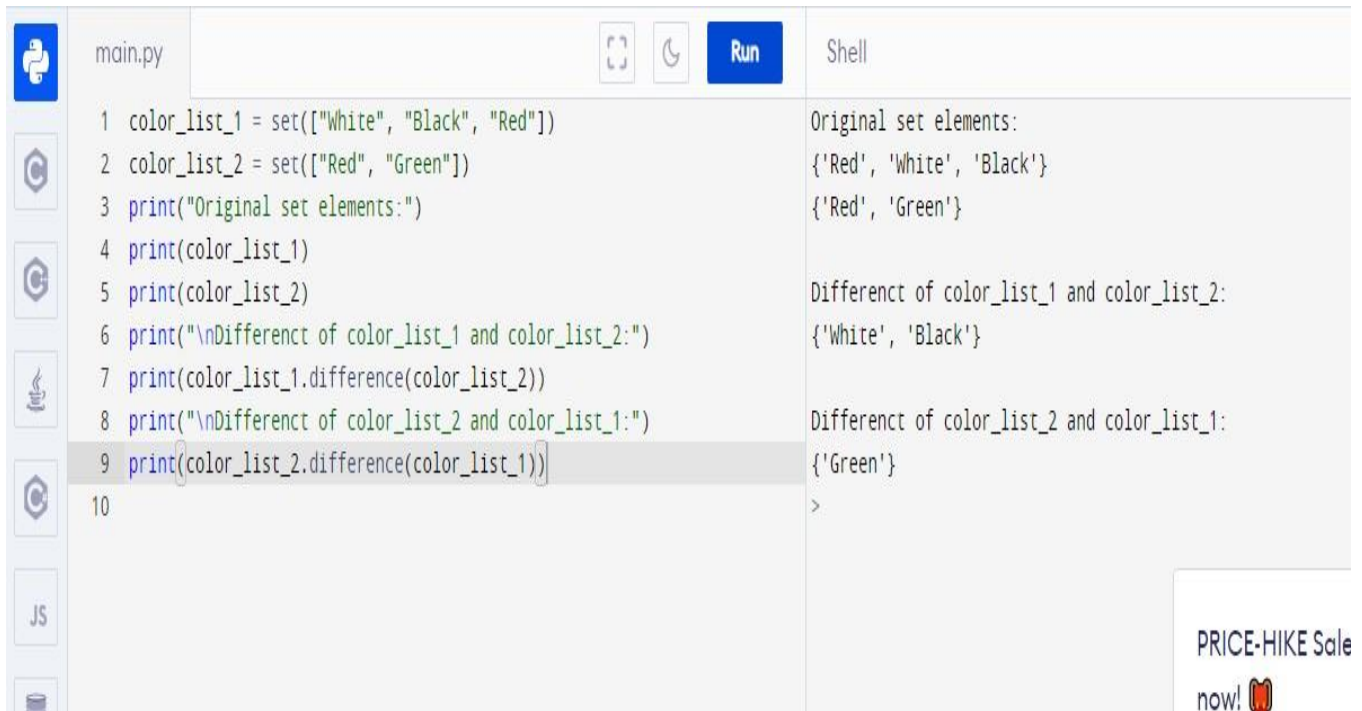
```
386  
462  
418  
344  
236  
566  
978  
328  
162  
758  
918  
237  
>
```

#### Question-4:

Write a Python program to print out a set containing all the colors from color\_list\_1 which are not present in color\_list\_2

#### Solution:

```
color_list_1 = set(["White", "Black", "Red"])  
color_list_2 = set(["Red", "Green"])  
print("Original set elements:")  
print(color_list_1)  
print(color_list_2)  
print("\nDifferenct of color_list_1 and color_list_2:")  
print(color_list_1.difference(color_list_2))  
print("\nDifferenct of color_list_2 and color_list_1:")  
print(color_list_2.difference(color_list_1))
```



The screenshot shows a Python IDE with a file named 'main.py'. The code in the editor is as follows:

```
1 color_list_1 = set(["White", "Black", "Red"])
2 color_list_2 = set(["Red", "Green"])
3 print("Original set elements:")
4 print(color_list_1)
5 print(color_list_2)
6 print("\nDifferenct of color_list_1 and color_list_2:")
7 print(color_list_1.difference(color_list_2))
8 print("\nDifferenct of color_list_2 and color_list_1:")
9 print(color_list_2.difference(color_list_1))
10
```

The 'Shell' window on the right displays the output of the script:

```
Original set elements:
{'Red', 'White', 'Black'}
{'Red', 'Green'}

Differenct of color_list_1 and color_list_2:
{'White', 'Black'}

Differenct of color_list_2 and color_list_1:
{'Green'}
>
```

In the bottom right corner, there is a promotional banner that reads: "PRICE-HIKE Sale now!" with a small shopping cart icon.

**Question-5:**

Write a Python program that will accept the base and height of a triangle and compute the area






**Solution:**

```
b = int(input("Input the base : "))
```




```
h = int(input("Input the height : "))
```

```
area = b*h/2
```

```
print("area = ", area)
```



main.py



```
1 b = int(input("Input the base : "))
2 h = int(input("Input the height : "))
3
4 area = b*h/2
5
6 print("area = ", area)
7
8
```

Shell

Input the base :