Assignment -1

Python Programming

Assignment Date	29 September 2022
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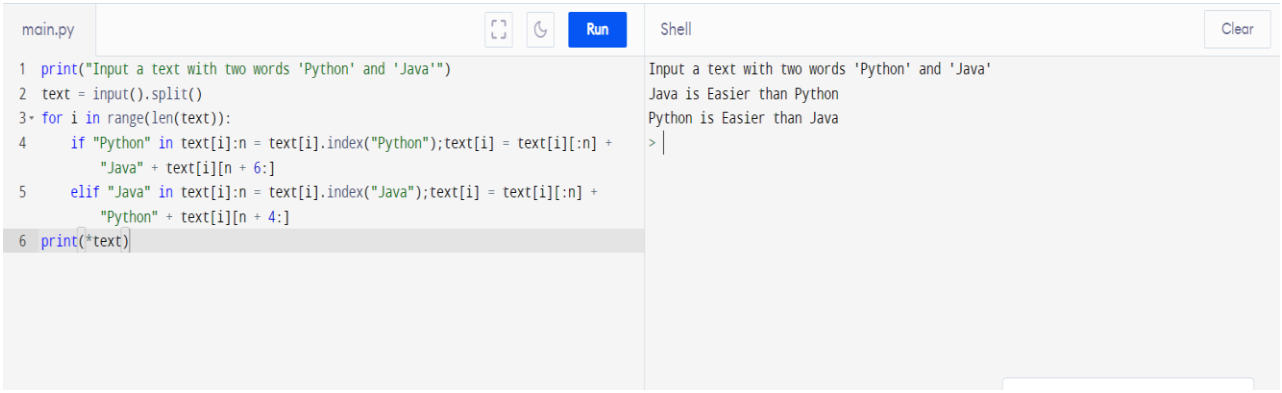
Maximum Marks	2 Marks

Question-1:

Write a Python program to replace a string "Python" with "Java" and "Java" with "Python" in a given string.

Solution:

```
print("Input a text with two words 'Python' and 'Java'")

text = input().split()

for i in range(len(text)):

if "Python" in text[i]:n = text[i].index("Python");text[i] = text[i][:n] + "Java" + text[i][n + 6:]

elif "Java" in text[i]:n = text[i].index("Java");text[i] = text[i][:n] + "Python" + text[i][n + 4:]


print(*text)
```



Question-2:

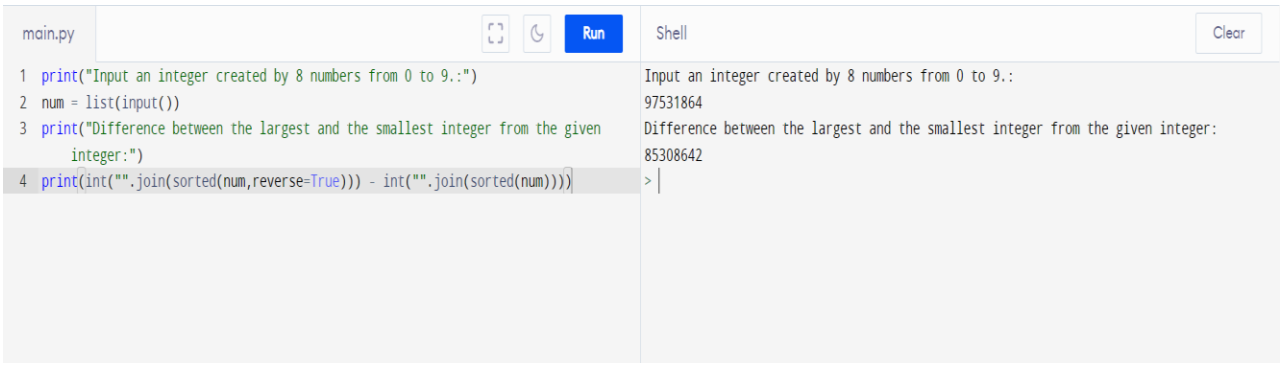
Write a Python program to find the difference between the largest integer and the smallest integer which are created by 8 numbers from 0 to 9. The number that can be rearranged shall start with 0 as in 00135668.

Solution:

```
print("Input an integer created by 8 numbers from 0 to 9.:")
```

```
num = list(input())
print("Difference between the largest and the smallest integer from the given integer:")
print(int("".join(sorted(num,reverse=True))) - int("".join(sorted(num))))
```

Output;



Question-3:

Write a Python program to compute the sum of first n given prime numbers.

Solution:

```
MAX = 105000
print("Input a number (n≤10000) to compute the sum:(0 to exit)")
is_prime = [True for _ in range(MAX)]
is_prime[0] = is_prime[1] = False
for i in range(2, int(MAX ** (1 / 2)) + 1):
if is_prime[i]:
for j in range(i ** 2, MAX, i):
is_prime[j] = False
primes = [i for i in range(MAX) if is_prime[i]]
```

```
while True:
    n = int(input())
    if not n:
        break
    print("Sum of first",n,"prime numbers:")
    print(sum(primes[:n]))
```

Output:

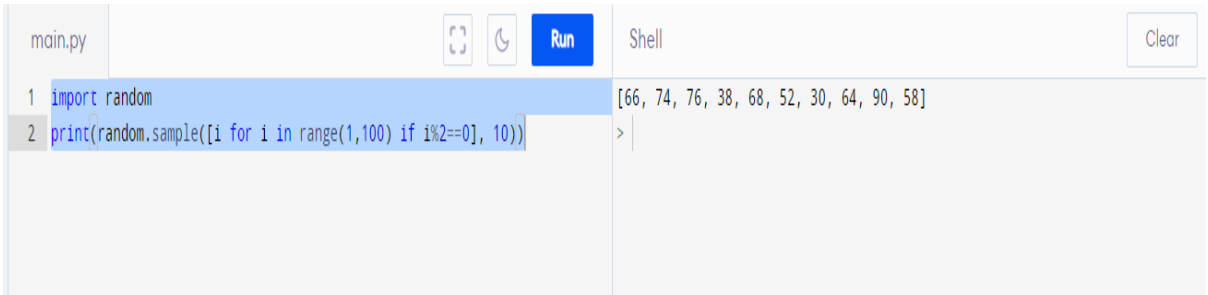
Question-4:

Write a Python program to randomly generate a list with 10 even numbers between 1 and 100 inclusive.

Solution:

```
import random
print(random.sample([i for i in range(1,100) if i%2==0], 10))
```

Output:



Question-5:

Write a Python program to count the number of prime numbers less than a given non-negative number.

Solution:

```
def count_Primes_nums(n):
 ctr = 0

    for num in range(n):
        if num <= 1:
            continue
     for i in range(2, num):
        if (num % i) == 0:
            break
    else:
        ctr += 1

  return ctr

  print(count_Primes_nums(10))
  print(count_Primes_nums(100))
```

Output: