

Assignment -1
Python Programming

Assignment Date	29 September 2022
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Maximum Marks	2 Marks

Question-1:

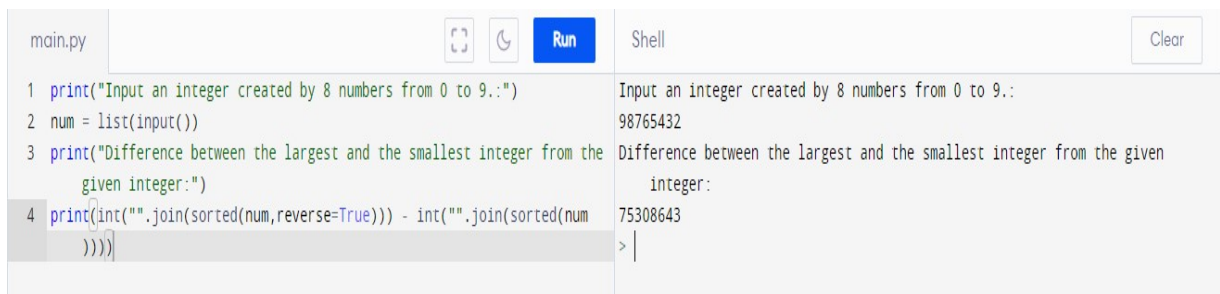
Write a Python program to find the difference between the largest integer and the smallest integer which are created by 8 numbers from 0 to 9. The number that can be rearranged shall start with 0 as in 00135668.

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))))
```



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

```
1 print("Input an integer created by 8 numbers from 0 to 9.:")
2 num = list(input())
3 print("Difference between the largest and the smallest integer from the
   given integer:")
4 print(int("".join(sorted(num,reverse=True))) - int("".join(sorted(num
   ))))
```

The output in the Shell window is:

```
Input an integer created by 8 numbers from 0 to 9.:
98765432
Difference between the largest and the smallest integer from the given
integer:
75308643
> |
```

Question-2:

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)

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

text = input().split()

```

main.py	<div> <div> <div></div> <div></div> <div>Run</div> </div> <div>Shell</div> <div>Clear</div> </div> <pre> 1 print("Input a text with two words 'Python' and 'Java'") 2 text = input().split() 3 for i in range(len(text)): 4 if "Python" in text[i]:n = text[i].index("Python");text[i] = text[i][:n] + "Java" + text[i][n + 6:] 5 elif "Java" in text[i]:n = text[i].index("Java");text[i] = text[i][:n] + "Python" + text[i][n + 4:] 6 print(*text) </pre>
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Question-3:

Write a Python program to that reads a date (from 2016/1/1 to 2016/12/31) and prints the day of the date. Jan. 1, 2016, is Friday. Note that 2016 is a leap year.

Solution:

```

from datetime import date

print("Input month and date (separated by a single
space):")
m, d = map(int, input().split())

weeks =
{1: 'Monday', 2: 'Tuesday', 3: 'Wednesday', 4: 'Thursday', 5: 'Friday', 6: 'Sat
urday', 7: 'Sunday'}

w = date.isoweekday(date(2016, m, d))
print("Name of the date: ",weeks[w])

```



main.py	<div> <div> <div></div> <div></div> <div>Run</div> </div> <div>Shell</div> <div>Clear</div> </div> <pre> 1 from datetime import date 2 print("Input month and date (separated by a single space):") 3 m, d = map(int, input().split()) 4 weeks = {1: 'Monday', 2: 'Tuesday', 3: 'Wednesday', 4: 'Thursday', 5: 'Friday', 6 : 'Saturday', 7: 'Sunday'} 5 w = date.isoweekday(date(2016, m, d)) 6 print("Name of the date: ",weeks[w]) </pre>
---------	---

Question-4:

Write a Python program to test whether two lines PQ and RS are parallel. The four points are P(x1, y1), Q(x2, y2), R(x3, y3), S(x4, y4).

Solution:

```
print("Input x1,y1,x2,y2,x3,y3,xp,yp:")
x1, y1,x2, y2, x3, y3, x4, y4 = map(float,
input().split())
print('PQ and RS are parallel.' if abs((x2 - x1)*(y4 -
y3) - (x4 - x3)*(y2 - y1)) < 1e-10 else 'PQ and RS are not
parallel')
```



main.py		Shell	
<pre>1 print("Input x1,y1,x2,y2,x3,y3,xp,yp:") 2 x1, y1,x2, y2, x3, y3, x4, y4 = map(float, input().split()) 3 print('PQ and RS are parallel.' if abs((x2 - x1)*(y4 - y3) - (x4 - x3)*(y2 - y1)) < 1e-10 else 'PQ and RS are not parallel')</pre>		<pre>Input x1,y1,x2,y2,x3,y3,xp,yp: 9 8 7 6 5 4 3 2 PQ and RS are parallel. > </pre>	

Question-5:

Write a Python program that accepts six numbers as input and sorts them in descending order.

Solution:

```
print("Input six integers:")
nums = list(map(int, input().split()))
nums.sort()
nums.reverse()
print("After sorting the said ntegers:")
print(*nums)
```

main.py		Shell	
<pre>1 print("Input six integers:") 2 nums = list(map(int, input().split())) 3 nums.sort() 4 nums.reverse() 5 print("After sorting the said ntegers:") 6 print(*nums)</pre>		<pre>Input six integers: 20 30 40 50 60 70 After sorting the said ntegers: 70 60 50 40 30 20 > </pre>	