Assignment 3

1. Find the Armstrong number in between the two numbers which was entered by the user.

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Code:

```
print('Armstrong Number within defined range')
num_a = int(input('Enter the Starting Index : '))
num_b = int(input('Enter the Ending Index : '))
for i in range(num_a, num_b):
  temp = i
  sum1 = 0
  while temp > 0:
    digit = temp % 10
    sum1 += digit ** 3
    temp //= 10

  if i == sum1 :
        print(i,'is an Armstrong Number')
```

Output:

```
Armstrong Number within defined range
Enter the Starting Index : 150
Enter the Ending Index : 400
153 is an Armstrong Number
370 is an Armstrong Number
371 is an Armstrong Number
```

2. Remove punctuations from following string:
"Hello this world @2020!!!"

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Code and Output:

```
def Punctuations(str1):
  punctuation = '''!()-[]{};:'"\,<>./?@#$%^&*_~'''
  for i in str1:
    if i in punctuation:
      str1 = str1.replace(i, '')
  print(f'String after removing punctuation: {str1}')

#DriverCode
str1 = 'hello this world @2020!!!'
Punctuations(str1)
```

```
String after removing punctuation: hello this world 2020
```

3. Sort the given list in alphabetical order. Explain reason for your output.
['Apple', 'banana', 'cat', 'REGEX', 'apple']

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Code and Output:

```
list1 = ['Apple', 'banana', 'cat', 'REGEX', 'apple']
list1.sort()
print(list1)
```

```
['Apple', 'REGEX', 'apple', 'banana', 'cat']
```

Reason: sort() function sort the string on the basis of the ASCII value of 1st letter of every string. ASCII values of 'A', 'R', 'a', 'b' and 'c' are 65, 82, 97, 98 and 99 respectively. So it will sort in ascending order as above.