Comparisons on strings, ASCII and UNICODE

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1 Comparisons on strings, ASCII and UNICODE

```python
[2]: if 'thor' > 'ironman':
         print('Thor is powerful')
     else:
         print('Ironman is powerful')
```

```
Thor is powerful
```

```python
[3]: if 'Thor' > 'ironman':
         print('Thor is powerful')
     else:
         print('Ironman is powerful')
```

```
Ironman is powerful
```

```python
[1]: if 10 > 20:
         print('Yes')
     else:
         print('No')
```

```
No
```

```python
[ ]: # strings
     # characters
     # ASCII
     American
     Standard
     Code for
     Information
     Interchange
     # 1963
     # character - a code point value
     # latin alphabets (a-z, A-Z)
     # digits (0-9)
     # special character !@#$%^&*()_+{}:"><?"
     # 127
     # a-z --> 97 - 122
     # b - 98, c - 99, d - 100....z-122
```

```
# A-Z --> 65 - 90
# A - 65, B - 66, C - 67, ... Z - 90
# 0-9 --> 48 - 57
# space --> 32
```

1.1 ord()

- ord() is built-in function in python. And it will produce the
  ASCII Codepoint value of a given character

```
[4]: print(ord('a'))
```

97

```
[5]: print(ord('z'))
```

122

```
[6]: print(ord('#'))
```

35

```
[7]: print(ord('!'))
```

33

```
[8]: print(ord(' '))
```

32

```
[9]: print(ord('9'))
```

57

```
[10]: print(ord('E'))
```

69

```
[13]: print(ord('Y'))
```

89

1.2 chr()

- will produce ASCII character corresponding to the given codepoint
  value

```
[14]: print(chr(97))
```

a

```
[15]: print(chr(89))
```

```
Y
```

```python
[16]: if 'a' > 'A':   # 97 > 65 # codepoint value in ASCII
          print("Yes")
      else:
          print("No")
```

```
Yes
```

```python
[17]: if chr(65) > chr(32): # 'A' > ' ' # 65 > 32
          print('Uppercase')
      else:
          print('Space')
```

```
Uppercase
```

```python
[18]: chr(65)
```

```
[18]: 'A'
```

```python
[19]: chr(32)
```

```
[19]: ' '
```

1.3   UNICODE Character Set

- ASCII has 127 characters in its characterset
- UNICODE has over 150000 characters in its characterset
- These characters include scripts of more than 70 natural languages around the globe including Indian languages like devanagari, telugu, tamil, malayalam...

```python
[22]: print(ord(' '))
```

```
3077
```

```python
[24]: print(chr(3078))
```

```python
[25]: print(chr(3079))
```

```python
[26]: if ' ' > 'a': # 3079 > 97
          print("Yes")
      else:
          print("No")
```

```
Yes
```

```
for i in range(3077, 3170):
    print(i, '-->', chr(i))
```

```
3077 -->
3078 -->
3079 -->
3080 -->
3081 -->
3082 -->
3083 -->
3084 -->
3085 -->
3086 -->
3087 -->
3088 -->
3089 -->
3090 -->
3091 -->
3092 -->
3093 -->
3094 -->
3095 -->
3096 -->
3097 -->
3098 -->
3099 -->
3100 -->
3101 -->
3102 -->
3103 -->
3104 -->
3105 -->
3106 -->
3107 -->
3108 -->
3109 -->
3110 -->
3111 -->
3112 -->
3113 -->
3114 -->
3115 -->
3116 -->
3117 -->
3118 -->
3119 -->
3120 -->
3121 -->
```

```
3122 -->
3123 -->
3124 -->
3125 -->
3126 -->
3127 -->
3128 -->
3129 -->
3130 -->
3131 -->
3132 -->
3133 -->
3134 -->
3135 -->
3136 -->
3137 -->
3138 -->
3139 -->
3140 -->
3141 -->
3142 -->
3143 -->
3144 -->
3145 -->
3146 -->
3147 -->
3148 -->
3149 -->
3150 -->
3151 -->
3152 -->
3153 -->
3154 -->
3155 -->
3156 -->
3157 -->
3158 -->
3159 -->
3160 -->
3161 -->
3162 -->
3163 -->
3164 -->
3165 -->
3166 -->
3167 -->
3168 -->
3169 -->
```

```python
[31]: print(chr(3114) + chr(3125) + chr(3112) + chr(3149))
```

```python
[34]: if 'thor' > 'ironman': # 116 > 105
          print('Thor is powerful')
      else:
          print('Ironman is powerful')
```

```
Thor is powerful
```

```python
[ ]: # When comparing two strings the result will be produced upon the
     # first differing characters in the two strings
     # t h o r
     # i r o nman
```

```python
[33]: ord('i')
```

```
[33]: 105
```

```python
[37]: if 'Thor' > 'ironman': # 'T' > 'i' 84 > 105
          print('Thor is powerful')
      else:
          print('Ironman is powerful')
```

```
Ironman is powerful
```

```python
[36]: ord('T')
```

```
[36]: 84
```

```python
[ ]: string1 = 'thor'
     string2 = 'ironman'
     # string1 is greater than string2
     # if you write these two strings in alphabetical order
     # string2 should be written before string 1
```

```python
[ ]: n1 = 15
     n2 = 45
     # n2 is greater than n1
     # if at all you want to write these 2 numbers in their Ascending order
     # first one will be 15 the next will be 45
```

```python
[ ]: 'aman', 'amit', 'amala'
```

```python
[ ]: 'amala', 'aman', 'amit'
```

```python
[38]: if 'aaabbbcc' < 'aaabbbaa': # 99 < 97
          print('Yes')
```

```
else:
    print('No')
```

No