Concepcion, Ryan   **ECE2112**   **8/27/2024**

2ECE-A   **Program Assignment #1**

ALPHABET SOUP PROBLEM: Create a function that takes a string and returns a string with its letters in alphabetical order.

Example: alphabet_soup("hello") → ehllo
                  alphabet_soup("hacker") → acehkr

Solution:

ALPHABET SOUP PROBLEM: Create a function that takes a string and returns a string with its letters in alphabetical order

```python
In [14]: def alphabet_soup(text):
             sorted_text = ''.join(sorted(text))
             return sorted_text

         print(alphabet_soup("hello"))
         print(alphabet_soup("hacker"))
         print(alphabet_soup("alphabet"))
```

```
ehllo
acehkr
aabehlpt
```

EMOTICON PROBLEM: Create a function that changes specific words into emoticons. Given a sentence as a string, replace the words smile, grin, sad and mad with their corresponding emoticon:

word	emoticon
Smile	:)
Grin	:D
Sad	:((
Mad	>:(

Example:

emotify("Make me smile") → Make me :)
emotify("I am mad") → I am >:(

Solution:

EMOTICON PROBLEM: Create a function that changes specific words into emotions. Given a sentence as a string, replace the works smile, grin, sad, and mad with their corresponding emoticon.

```python
In [10]: def emotify(sentence):
             # Use dictionary to pair each emotion with its corresponding emoticons
             emoticons = {"smile": ":)", "grin": ":D", "sad": ":(", "mad": ">:("}

             # Split the sentence into words
             words = sentence.split()

             # Replace words with emoticons if the corresponding keys
             new_sentence = ' '.join([emoticons[word] if word in emoticons else word for word in words])

             return new_sentence

         print(emotify("Make me smile"))
         print(emotify("I am mad"))
         print(emotify("I am sad"))
         print(emotify("Make me grin"))
```

```
Make me :)
I am >:(
I am :(
Make me :D
```

UNPACKING LIST PROBLEM: Unpack the list writeyourcodehere into three variables, being first, middle, and last, with middle being everything in between the first and last element. Then print all three variables.

Example: lst = [1, 2, 3, 4, 5, 6]

Output: first: 1   middle: [2,3,4,5]   last: 6

Solution:

UNPACKING LIST PROBLEM: Unpack the list writeyourcodehere into three variables, being first, middle, and last, with middle being everything in between the first and last element. Then print all variables.

In [18]:
```python
# Create your list named writeyourcodehere
writeyourcodehere = [1, 2, 3, 4, 5, 6, 7, 8 , 9 ,10]

# Unpacking the list, with the middle being everything in between the first and last element
first, *middle, last = writeyourcodehere

# Printing the variables
print(f"first: {first} middle: {middle} last: {last}")
```

first: 1 middle: [2, 3, 4, 5, 6, 7, 8, 9] last: 10