1) Strings – A collection of characters
   a. Write a function that reverses its string argument.

   b. Write a function that removes all occurrences of a given letter from a string.

   c. Write a function that removes all occurrences of a given letter from a string, repeats all occurrences in the string of a second given letter a given number of times, concatenates the result with an additional given string, and returns the result.
2) Strings - Indexing
   a. What is the output of the following code?

   ```python
   word = 'Strings are great!
   print(word[0])
   print(word[6])
   print(word[-1])
   print(word[18])
   ```

   b. Indexing and length – What is the output of the following code?

   ```python
   word = 'Colgate'
   for index in range(len(word)):
       print(word[index])
   ```

   c. Indexing and Assignment – Strings are Immutable
      i. What is the output of the following code?

   ```python
   word = 'cat'
   word[0] = 'h'
   print(word)
   ```
3) Strings – Slicing
   a. What is the output of the following code?

```python
hero = 'Batman'
print(hero[0:3])
print(hero[3:])
print(hero[-1:-4])
print(hero[:2])
print(hero[::2])
print(hero[4:8])
```

b. Write a statement that changes the first letter of the variable `word` to ‘h’.

c. Write a function takes a phrase as an argument, finds the string ‘space’ within the phrase, replaces it with the string ‘up’ and returns the resulting phase. Do this without using any string methods.
d. What is the return value of the function you wrote above if it is pass the argument “Use reverse to backspace into the parking space.”?

e. Write a function that takes a phrase as an argument, finds the first occurrence of the string ‘space’ within the phrase, replaces it with the string ‘up’ and returns the resulting phrase. Do this without using any string methods.

4) String Methods
   a. What is the output of each of the following expressions?
      Assuming that:

      ```python
      str1 = "Coach"
      str2 = "soccer"
      ```

      i. print(str1.lower())
      ii. print(str2.capitalize())
      iii. print(str2.count('c'))
      iv. print(str2.replace('cer','k'))
      v. print(str1.find('c'))
      vi. print(str2.isalpha())
      vii. print(str1.lower().count('c'))
5) Write a function called `isPalindrome` that checks whether a given string is a palindrome. (Hint: use the reverse function written previously)
   a. Break the problem down with computational thinking.

   b. Write the function.
6) String Format Method
   a. What is the output of the following?

   i. print('Hi {}!'.format("meg".capitalize()))

   ii. two = "2"
       three = 3
       print('{} {} {}'.format("1", two, three))

   iii. print('There are {:.2f}'.format(8.349304))

   b. Write a program that asks for an item name, the price of the package of the item and the quantity of the item in one package. The program should then calculate the cost per item and display a sentence such as:

   Each _____ costs $x.xx.

   Where the _____ is the name of the item. And $x.xx is the cost rounded to the nearest cent.