Assignment 3 - Python (Strings, Lists & Functions)

1. Append items from a specified list
```
list1 = [1, 2, 3]
list2 = [4, 5, 6]
list1.extend(list2)
print(list1)
```

2. Check if a substring is present in a string
```
string = "Python programming"
substring = "Python"
if substring in string:
  print("Substring present")
else:
  print("Substring not present")
```

3. Words frequency in a string
```
string = "python is easy and python is powerful"
words = string.split()
freq = {}
for word in words:
  freq[word] = freq.get(word, 0) + 1
print(freq)
```

4. Convert Snake case to Pascal case
```
snake = "python_programming_language"
pascal = "".join(word.capitalize() for word in snake.split("_"))
print(pascal)
```

5. Factorial using function
```
def factorial(n):
  result = 1
  for i in range(1, n+1):
    result *= i
  return result
print(factorial(5))
```

6. Check number in range
```
def check_range(num, start, end):
  return start <= num <= end
print(check_range(7, 1, 10))
```

7. Count uppercase and lowercase letters
```
def count_case(s):
  upper = lower = 0
  for c in s:
    if c.isupper(): upper += 1
    elif c.islower(): lower += 1
  print(upper, lower)
count_case("Hello Python World")
```

8. Count local variables in a function
```
def sample():
  a = 1
  b = 2
```

```
  c = a + b
  return c
print(sample.__code__.co_nlocals)
```

9. Remove duplicates from string

```
string = "programming"
result = ""
for c in string:
  if c not in result:
    result += c
print(result)
```

10. Palindrome check using function

```
def is_palindrome(s):
  return s == s[::-1]
print(is_palindrome("madam"))
```

11. Sort hyphen separated words

```
string = "green-red-yellow-black-white"
words = string.split("-")
words.sort()
print("-".join(words))
```