

## Programming Assignment-11

**1. Write a Python program to find words which are greater than a given length `k`?**

**Ans.**

```
def find_long_words(sentence, k):  
    words = sentence.split()  
    return [word for word in words if len(word) > k]
```

**# Example**

```
sentence = "Python is a great programming language"  
k = 5  
print(f"Words longer than {k} characters:", find_long_words(sentence, k))
```

**2. Write a Python program for removing i-th character from a string?**

**Ans.**

```
def remove_ith_character(string, i):  
    return string[:i] + string[i+1:]
```

**# Example**

```
string = "Python"  
i = 3  
print(f"String after removing {i}-th character:", remove_ith_character(string, i))
```

**3. Write a Python program to split and join a string?**

**Ans.**

```
def split_and_join_string(string, delimiter):  
    words = string.split() # Split by spaces  
    return delimiter.join(words) # Join by given delimiter
```

**# Example**

```
string = "Hello world this is Python"
```

```
delimiter = '-'
```

```
print("Joined string:", split_and_join_string(string, delimiter))
```

#### **4. Write a Python program to check if a given string is a binary string or not?**

**Ans.**

```
def is_binary_string(string):  
    return all(char in '01' for char in string)
```

*# Example*

```
string = "10101001"  
print(f"Is '{string}' a binary string? {is_binary_string(string)}")
```

#### **5. Write a Python program to find uncommon words from two Strings?**

**Ans.**

```
def find_uncommon_words(string1, string2):  
    set1 = set(string1.split())  
    set2 = set(string2.split())  
    return list((set1 ^ set2)) # Symmetric difference
```

*# Example*

```
string1 = "apple orange banana"  
string2 = "banana mango orange"  
print("Uncommon words:", find_uncommon_words(string1, string2))
```

#### **6. Write a Python program to find all duplicate characters in a string?**

**Ans.**

```
from collections import Counter  
def find_duplicate_characters(string):  
    char_count = Counter(string)
```

```
return [char for char, count in char_count.items() if count > 1]
```

#### # Example

```
string = "programming"  
print("Duplicate characters:", find_duplicate_characters(string))
```

### 7. Write a Python program to check if a string contains any special character?

**Ans.**

```
import re  
  
def contains_special_characters(string):  
    return bool(re.search(r'^a-zA-Z0-9', string))
```

#### # Example

```
string = "Hello@World!"  
print(f"Does '{string}' contain special characters? {contains_special_characters(string)}")
```