📝 DAY 11 – String Functions (Advanced String Methods)

Class Programs → 4

Assignment Programs → 4

⭐ 1. Important String Functions Used Today

Method	Purpose
length()	Returns number of characters
charAt(i)	Returns character at index i
substring(start, end)	Returns part of the string
contains()	Checks if substring exists
startsWith()	Checks if string starts with value
endsWith()	Checks if string ends with value
replace()	Replace characters/words
indexOf()	Returns first occurrence position
lastIndexOf()	Returns last occurrence position
split()	Splits string based on delimiter

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⭐⭐ CLASS PROGRAM – 1

Program: Count words in a sentence using split()

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Pseudo Code

Start
Read sentence s
Split s by space → words[]
Count words using length
Print count
End

Flow

Read a sentence

Split by space

Count number of words

Variables

s → input sentence

words[] → stores separated words

Program

```
import java.util.Scanner;

class CountWords {
    public static void main(String args[]) {

        Scanner sc = new Scanner(System.in);

        System.out.print("Enter a sentence: ");
        String s = sc.nextLine();

        String words[] = s.split(" ");

        System.out.println("Word Count = " + words.length);
    }
}
```

Output Example

```
Enter a sentence: Java is very easy
Word Count = 4
```

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⭐ ⭐ CLASS PROGRAM – 2

Program: Extract substring from a string

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Pseudo Code

Start
Take s
sub = s.substring(2, 6)
Print sub
End

Flow

Use substring(start, end)

Extract part of string

Variables

s → main string

sub → extracted substring

Program

```
class SubStringDemo {
    public static void main(String args[]) {

        String s = "Programming";

        String sub = s.substring(2, 6);

        System.out.println("Substring = " + sub);
    }
}
```

Output

Substring = ogra

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⭐ ⭐ CLASS PROGRAM – 3

Program: Check if string starts with / ends with a given substring

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Pseudo Code

Start
Take s
Check s.startsWith("Pro")
Check s.endsWith("ing")
End

Flow

Check two string conditions

Display results

Variables

s → input string

Program

```
class StartEndCheck {
    public static void main(String args[]) {

        String s = "Programming";

        System.out.println(s.startsWith("Pro"));
        System.out.println(s.endsWith("ing"));
```

```
   }
}
```

Output

```
true
true
```

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⭐ ⭐ CLASS PROGRAM – 4

Program: Replace characters in a string

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Pseudo Code

```
Start
Take s
newString = s.replace('a','@')
Print newString
End
```

Flow

Replace character ‘a’ with ‘@’

Display the result

Variables

s → original string

newString → modified string

Program

```
class ReplaceChar {
   public static void main(String args[]) {

      String s = "Java Language";

      String newString = s.replace('a', '@');

      System.out.println("After Replace: " + newString);
   }
}
```

Output

J@v@ L@ngu@ge

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⭐ ⭐ ⭐ ASSIGNMENT PROGRAMS – 4

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⭐ Assignment – 1

Program: Count how many times a character appears in a string

```
class CountCharacter {
   public static void main(String args[]) {

      String s = "banana";
      char ch = 'a';
      int count = 0;

      for (int i = 0; i < s.length(); i++) {
         if (s.charAt(i) == ch)
            count++;
```

```
        }

        System.out.println("Count = " + count);
    }
}
```

Output

```
Count = 3
```

⭐ Assignment – 2

Program: Find first and last occurrence of a character

```
class Occurrence {
    public static void main(String args[]) {

        String s = "hello world";

        System.out.println("First = " + s.indexOf('o'));
        System.out.println("Last = " + s.lastIndexOf('o'));
    }
}
```

Output

```
First = 4
Last = 7
```

⭐ Assignment – 3

Program: Convert first letter of each word to uppercase

```
class CapitalizeWords {
    public static void main(String args[]) {

        String s = "java programming language";
        String words[] = s.split(" ");
```

```
        String result = "";

        for (int i = 0; i < words.length; i++) {
            String w = words[i];
            String cap = w.substring(0,1).toUpperCase() + w.substring(1);
            result = result + cap + " ";
        }

        System.out.println(result);
    }
}
```

Output

Java Programming Language

⭐ Assignment – 4

Program: Remove spaces from a string

```
class RemoveSpaces {
    public static void main(String args[]) {

        String s = "J a v a  L a n g";
        String newString = s.replace(" ", "");

        System.out.println(newString);
    }
}
```

Output

JavaLang