SLIIT ACADEMY

Higher Diploma in Information Technology
Year 1, Semester 1

Introduction to Programming(C++)

Lecture 08 : Advanced Programming Techniques - Array Processing in C++ - II

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Intended Learning Outcomes

End of this lecture you will be able to learn ,

LO1 : Understand the concept of passing one-dimensional arrays as a parameter to functions .

LO2 : Understand the concept of passing two-dimensional arrays as a parameter to functions .

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One-dimensional Arrays as a Parameter to functions

- By default, arrays are passed to functions by reference. It is a good idea to pass arrays as **const reference parameters** if you want to assure that the functions will never change the values stored in the arrays.
- syntax for passing an array to a function in C++ is:

```
functionName(arrayName);
```

- The following function signature accepts an **array x** as a reference parameter, and it also accepts the number of entries in the array (its size).

```
void displayValues (int x[], int size);
```

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Two-dimensional Arrays as a Parameter to functions

- When passing a two-dimensional array to a function, you must specify the number of columns as a constant when you write the parameter type, so the compiler can pre-calculate the memory addresses of individual elements.

Function Prototype

```
return type functionName(arrayName[][column],int row ,int col);
```

Example

```
void print(int arr[][5], int row ,int col);
```

Function Invocation

```
functionName(arrayName,row,col);
```

```
print(arr,3,4);
```

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Summary

- Passing one-dimensional arrays as a parameter to functions .
- Passing two-dimensional arrays as a parameter to functions .

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