University of Central Punjab

**Faculty of Information Technology**

# Object Oriented Programming

**Fall 2025**

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| **Lab 01** | |  |
| **Topic** | Revision Lab |
| **Objective** | The basic purpose of this lab is to revise some preliminary concepts of C++ that has been covered in the course of Introduction to Computing and Programming Fundamentals.  Its objective is to recall previously learned basic concepts like revision of arrays and functions. |

**Instructions:**

* Indent your code.
* Comment your code.
* Use meaningful variable names.
* Plan your code carefully on a piece of paper before you implement it.
* Name of the program should be same as the task name. i.e. the first program should be Task\_1.cpp
* **void main() is not allowed. Use int main()**
* **You are not allowed to use any built-in functions**
* **You are required to follow the naming conventions as follow:**

o **Variables:** firstName; (no underscores allowed) o **Function:** getName(); (no underscores allowed) o **ClassName:** BankAccount (no underscores allowed)

**Students are required to complete the following tasks in lab timings.**

**Task 1:**

Write a non-returning function swap which takes two integers as parameters by value to swaps those integers.

**Task 2:**

Write a non-returning function swapwhich takes two integers as parameters by reference to swaps those integers.

**Task 3:**

Write a returning function **strLength** which takes only one **char\*** as parameter and returns the length of the array. Its prototype should be: **int strLength(const char\* src);**

**Task 4:**

Write a non-returning function **strCopy** which takes only two **char\*** as parameters, one is destination and other is source. Your task is to copy all the data of the source into destination.

**Hint:** You can use the **strLength** function of Task 3 to calculate the length of the source.

**void strCopy(char\* &dest, const char\* src);**

**NOTE:** Be careful not to create a dangling pointer when copying the string. Make sure to allocate enough memory for the destination string and avoid using a pointer that has already been deleted.

**Task 5:**

Write a non-returning function searchAndDelete with default arguments

The task is to write a function **searchAndDelete** that receives an integer array, its size, and an element to search and delete from the array. The function should shrink the array after deletion. The function should have default arguments.

**Task 6:**

Your task is to create a menu driven main where user should select the function that needs to be tested from the above functions.

**For example:**

Press 1 for swap call by value

Press 2 for swap call by referance

Press 3 for strLength

Press 4 for strCopy

Press 5 for searchAndDelete

Press 0 to exit