

Mehran University of Engineering and Technology Jamshoro

**ASSIGNMENT : LAB 06**

**SUBJECT : PROGRAMMING FUNDAMENTALS**

**ROLL NO : 24BSAI29**

**SUBMITTED BY : SYED MUHAMMAD QASIM**

**SUBMITTED TO : MA’AM FAHAMA BARKZAI**

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| Department of Software Engineering  Mehran University of Engineering and Technology, Jamshoro |

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| Course: AI-112 – Programming Fundamentals | | | |
| Instructor | Engr. Fahama Barakzai | **Practical/Lab No.** | 06 |
| Date |  | **CLOs** | 3 |
| Signature |  | **Assessment Score** | 01 Mark |

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| Topic | Working with Functions |
| Objectives | * To become familiar with Functions, Function declaration/prototype, definition and call. * To work with pre-defined and user-defined functions. * Passing arguments to functions by value and by reference. |

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| Lab Discussion: Theoretical concepts and Procedural steps |

**TOOLS: TURBOO C++/ DEV C++/ VS-CODE/ CODE BLOCKS**

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| Lab Tasks |

1. Practice a program with a function that takes two parameters, adds them together, then returns the sum. The program should ask the user for two numbers, then call the function with the numbers as arguments, and tell the user the sum.
2. Try to create a calculator that takes a number, a basic math operator **(+,-,\*,/)**, and a second number all from user input, and have it print the result of the mathematical operation.

**Note:** Mathematical operations should be wrapped inside the function.

1. Practice a C++ program that demonstrates the working and uses arguments pass by value and arguments pass by reference.
2. Reproduce a function called **zero\_small()** that has two integer arguments being passed by reference and sets the smaller of the two numbers to 0.

**Note:** Write the main program to access the function.

1. Rebuild a function that takes numbers as arguments and Swap two numbers.

**Note:** Use call by reference.