



FACULTY OF COMPUTER SCIENCE AND ENGINEERING
Ghulam Ishaq Khan Institute of Engineering Sciences and Technology, Topi

Lab Duration: 3 hrs. CS112 Object Oriented Programming Lab

Marks: 10

Lab No: 02

Instructor: Mr. Usman Haider

Dated:21/02/2022

Before performing tasks, keep in mind following rules:

- 1. CHEATING IS NOT ALLOWED. Looking at someone's else screen is also cheating.**
- 2. Mobile phone and internet usage are not allowed.**
- 3. If you have any queries related to task, you can ask instructors only. Never talk to each other until you are allowed.**
- 4. Do not answer any query until you are asked.**
- 5. Perform all the tasks.**
- 6. Avoiding any of the above rules will lead to marks deduction.**

Task 1: Power checker

Write a C ++ Program to Check if a given Integer is Power of 2 using Bitwise Operators and macro.

Sample Input:

Please enter number: 16

Sample Output:

Yes 16 is the power of 2

Task 2: Power finder

Define a macro that acts as a function which solves the following using Bitwise Operators.

$$num1 * 2^{num2}$$

Sample Input:

Enter first number:

3

Enter second number:

2

Sample Output:

The answer is: 12

Task 3: Adder

Write a program to make a number system adder i.e., the program should add two number of same base. For example, if user selects base 2, then the program should be able to sum two binary numbers.

Sample Input:

Enter base system:

2

Enter number 1 with base:

101

Enter number 2 with base:

110

Sample Output:

$(101) + (110) = 1011$