

JAYPEE UNIVERSITY OF ENGINEERING & TECHNOLOGY,  
GUNA  
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING  
Computer Programming Lab (14B17CI171)  
B.Tech. (CSE/ECE/MECH/CE/CHE) Semester-I

Lab Practice 12

**User defined functions**

*Input from main program and output also from main program*

1. Write a Menu Driven program to find addition, subtraction, multiplication and division all using one user defined function for each operation.
2. Write a program to swap two values where input and output statements are in calling (main) function.
3. Write a program to find the greatest common divisor of two given numbers.
4. WAP to divide one number by another without using the division operator.
5. WAP to calculate the factorial of a given number.
6. WAP to convert binary number into decimal.
7. WAP to calculate series:  $\sin X = X - X^3 / 3! + X^5 / 5! - X^7 / 7! + \dots$
8. WAP to determine whether a number is 'even' or 'odd'.
9. WAP to determine if a given number is prime or not.

*Input from main program and output from UDF*

10. WAP to print all the factors of a given number.
11. WAP to generate a Fibonacci series.
12. WAP to convert decimal into binary number.

*Recursion*

13. WAP that calculates the factorial of a given number using recursion.
14. Write a program to find the greatest common divisor of two given numbers using recursion.