

JAYPEE UNIVERSITY OF ENGINEERING & TECHNOLOGY, GUNA
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
Software Development Lab (18B17CI171)
B.Tech. (CSE/ECE/MECH/CE/CHE) Semester-I

Lab Experiment-10

C Programs: Function and Recursion

User defined functions

Input from main program and output also from main program (five programs)

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 :- $\sin X = X - \frac{X^3}{3!} + \frac{X^5}{5!} - \frac{X^7}{7!} + \dots$
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 (two programs)

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.
15. WAP to generate Fibonacci series using recursion.
16. WAP to displaying numbers from 1 to n.