

# **Indira Gandhi Delhi Technical University For Women**

**(Established by Govt. of Delhi vide Act 09 of 2012)**

**Kashmere Gate, Delhi - 110006**

## **Summary Report**

**On**

## **Workshop “Developing Proficiency in C Programming”**

Workshop on Developing Proficiency in C Programming was conducted by Ms. Nidhi Arora , Assistant Professor, IT along with Ms. Ritu Garg, Research Scholar, IT from 15th June, 2016 to 24th June, 2016. 50 students attended this workshop.

The workshop aimed at providing practical training to the students regarding the basic and advanced concepts of C Programming. The focus of the workshop was to build problem solving approach with emphasis on algorithm development for solving a given problem and then, supplementing it with probable improvements. Advanced Programming Techniques were also introduced to enable efficient, robust and timely solutions for real world problems.

Following basic topics were discussed:

1. Compilation Process (Pre-processing, compiling and assembling).
2. Scope and visibility of variables (Specially use of register and extern keywords).
3. Functioning of bitwise operators.
4. Command-Line Arguments.
5. Use of pointers and array of pointers.

6. Use of function pointers.
7. Application of Structures, bit vectors, unions and enumeration.
8. Recursive function calls.
9. Compiler optimizations in C.
10. File Handling

During the practical sessions, students executed C programs using gcc compiler on LINUX operating system and practiced basic set of commands in LINUX. Algorithms on Searching (Linear, Binary search) and sorting techniques (Bubble, Insertion, Selection Sort) were discussed and students performed the hands-on session based on these techniques. Basic concepts of Data Structures such as linked lists, stacks, queues, trees and graphs were also discussed. Students were given advanced case study based programming exercises to be performed in the lab sessions based on the above mentioned topics.

A handwritten signature in black ink, appearing to read 'Na' or 'Nidhi Arora', enclosed within a large, loopy circular stroke.

Coordinator

Ms. Nidhi Arora

Assistant Professor, Department of IT