KPIT

C PROGRAMMING

KPIT Technologies Ltd.

Skill Title: C Programming

1. Course Content / Syllabus

COURSE DETAILED OUTLINE:

CHAPTER 1: Getting Started with C

Alphabets, Digits, Special symbol, constant, variables, keywords, Types of constants, Rules for constructing – Integer constants, real constants, character constants, variable names, Types of variables, variable and their usage, compilation, and execution.

CHAPTER 2: C Instructions

Types of Instructions, Type Declaration Instruction, Arithmetic Instruction, Integer and float conversions, Types conversion in Assignments, Hierarchy of Operations, Associativity of Operations, Control Instructions.

CHAPTER 3: Decision Control Instruction

The if – else statement, Multiple statements within if – else, Nested if -else, A word of Caution.

CHAPTER 4: More Complex Decision Making

Use of Logical Operators, Hierarchy of Operators Revisited, Conditional Operators.

CHAPTER 5: Loop Control Instruction

Loop, While Loop – Tips and Traps, More Operators.

CHAPTER 6: More Complex Repetitions

For Loop, Break Statement, Continue Statement, Do – While Loop, Odd Loop

CHAPTER 7: Case Control Instruction

Decision using Switch, Switch vs if-else ladder, goto Statements.

CHAPTER 8: Functions

What is Function, Communication between Functions, Order of passing arguments, Using Library functions, Once Dicey Issue, Return Type of Function.

CHAPTER 9: Pointers

Call by Value and Call by Reference, Pointers, Pointer Types and their sizes, Function calls, Utility of Call by Reference, uses of Pointers.

CHAPTER 10: Recursion

Recursion

CHAPTER 11: Data Type Revisited

Integers, Character, Reals, Storage classes in C – Auto, Register, Extern, Static.

CHAPTER 12: The C Preprocessor

Features of C Preprocessors, Macro Expansion, File Inclusion, Conditional Compilation, Miscellaneous Directives, The Build Process.

CHAPTER 13: Arrays

What are Arrays, More on Arrays, Pointers and Arrays, Flexible Arrays.

CHAPTER 14: Multidimensional Arrays

Two – Dimensional Arrays, Array of Pointers, 3D Arrays.

CHAPTER 15: Strings

What are strings, More about strings, Pointers and Strings, Standard Library String Functions.

CHAPTER 16: Handling Multiple Strings

2-D Array of characters, Array of Pointers to strings, Limitation of Array of Pointer to Strings.

CHAPTER 17: Structures

Why use of Structures, Array of Structures, Intricacies of Structures, Uses of Structures.