

Course No: MCA-4T1
Course Title: Advanced UNIX/LINUX Programming

Unit I

Unix Basics: Introduction to Unix/Linux, Basic Commands, Text processing commands, data processing in Unix/Linux, Unix Administration – creating and managing users, managing printing.

Unit II

Introduction to Shell: Unix/Linux Shells, Shell variables, Environment variables. Arithmetic, Relational and Logical operators.

Programming with Shell: Shell Programming, Different Shell constructs, looping statements, decision statements, keywords, solving arithmetic expressions.

Unit III

GUI Development in Unix/Linux: Accessing Unix and Linux in GUI mode, Introduction to X Windows. Introduction to GUI development in Unix and Linux, Introduction to Qt as development tool. Introduction to various controls and forms in Qt. Designing simple forms in Qt, manipulating various controls in Qt.

Unit IV

Database Basics with Unix and Linux: Basics of Database, Introduction to MySQL, Basic commands of MySQL e.g. insert, delete, update etc. Connecting to database with Qt. Develop small application using Qt and MySQL.

References Books:

Kernighan and Pike, “The UNIX Programming Environment”, Pearson Education.

Karnetkar, “ UNIX Shell Programming”, BPB.

Tackett & Burnett, “Using Linux- Special Edition(Que)”, PHI.