

# JAYA ENGINEERING COLLEGE

## DEPARTMENT OF INFORMATION TECHNOLOGY

S.No	Lab Code	List of Experiments	System Nos
1	GE6161	Computer Practice laboratory	30
2	IT6212	Programming and Data Structures Laboratory 1	30
3	IT6311	Programming and Data Structures Laboratory 2	30
4	IT6312	Database Management System Laboratory	30
5	IT6412	Operating System Laboratory	30
6	IT6413	Software Engineering Laboratory	30
7	IT6511	Networks Laboratory	30
8	IT6512	Web Programming Laboratory	30
9	IT6513	Case Tools Laboratory	30
10	IT6611	Mobile Application Development Laboratory	30
11	IT6612	Compiler Laboratory	30
12	IT6711	Data Mining Laboratory	30
13	IT6712	Security Laboratory	30
14	IT6713	Grid and Cloud Computing Laboratory	30

# **LAB OBJECTIVES**

## **COMPUTER PRACTICE LABORATORY-GE6161**

- Be familiar with the use of Office software.
- Be exposed to presentation and visualization tools.
- Be exposed to problem solving techniques and flow charts.
- Be familiar with programming in C and learn to use arrays, strings, functions, structures and unions.

## **PROGRAMMING AND DATA STRUCTURES LABORATORY 1-IT6212**

- Be familiar with C programming.
- Be exposed to implementing abstract data types and learn to use files.

## **PROGRAMMING AND DATA STRUCTURES LABORATORY 2-IT6311**

- Be familiarized with good programming design methods, particularly top-down design.
- Getting exposure in implementing the different data structures using C++
- Appreciate recursive algorithms.

## **DATABASE MANAGEMENT SYSTEM LABORATORY-IT6312**

- Learn to create and use the database.
- Be familiarized with the query language.
- Have hands on experience on DDL commands
- Have a good understanding of DML commands and DCL commands,
- Familiarize advanced SQL queries and exposed to different applications.

## **OPERATING SYSTEM LABORATORY-IT6412**

- Learn shell programming and the use of filters in the UNIX environment.
- Be exposed to programming in C using system calls.
- Learn to use the file system related system calls and exposed to process creation and Inter process communication.
- Be familiar with implementation of CPU scheduling algorithms, page replacing algorithms and dead lock avoidance.

## **SOFTWARE ENGINEERING LABORATORY-IT6413**

- To understand the software engineering methodologies for project development.
- To gain knowledge about open source tools for computer aided software engineering.
- To develop an efficient software using case tools.

## **NETWORKS LABORATORY-IT6511**

- Learn socket programming and familiar with simulation tools.
- Have hands on experience on various networking protocols.

### WEB PROGRAMMING LABORATORY-IT6512

- Be familiar with web page design using HTML/DHTML and style sheets.
- Be exposed to creation of user interfaces using java frames and applets.
- Learn to create dynamic web pages using server side scripting.
- Learn to write PHP database functions and learn .net framework and RMI.

### CASE TOOLS LABORATORY-IT6513

- Learn the basics of OO analysis and designs.
- Be exposed to the UML design diagrams.
- Learn to map design to code and familiar with the various testing techniques.

### MOBILE APPLICATION DEVELOPMENT LABORATORY-IT6611

- Know the components and structure of mobile application development frameworks for android and windows OS based mobiles.
- Understand how to work with various mobile application development frameworks.
- Learn the basic and important design concepts and issues of development of mobile applications.
- Understand the capabilities and limitation of mobile devices.

### COMPILER LABORATORY-IT6612

- Be exposed to compiler writing tools.
- Learn to implement the different phases of compiler and familiar with control flow and data flow analysis.
- Learn simple optimization techniques

### DATA MINING LABORATORY-IT6711

- Be familiar with the algorithms of data mining.
- Be acquainted with the tools and techniques used for knowledge discovery in data bases.
- Be exposed to web mining and text mining.

### SECURITY LABORATORY-IT6712

- Be exposed to the different cipher techniques.
- Learn to implement the algorithms DES,RSA,MD5,SHA-1.
- Learn to use tools like GnuPG,KF sensor, netstrumbler.

### GRID AND CLOUD COMPUTING LABORATORY-IT6713

- Be exposed to tool kits for grid and cloud environment.
- Be familiar with developing web services/applications in grid framework.
- Learn to run virtual machines of different configuration.
- Learn to use hadoop.