

# **KASIREDDY NARAYANREDDY COLLEGE OF ENGINEERING AND RESEARCH**

**ABDULLAPUR (V), ABDULLAPURMET (M), R.R DIST-501505  
(Approved By AICTE,New Delhi & Affiliated to JNTUH,HYDERABAD)**



## **DESIGN AND ANALYSIS OF ALGORITHMS LAB(CS505PC)**

### **List of Experiments:**

- 1. Write a java program to implement Quick sort algorithm for sorting a list of integers in ascending order**
- 2. Write a java program to implement Merge sort algorithm for sorting a list of integers in ascending order.**
- 3. Write a java program to implement the dfs algorithm for a graph.**
- 4. Write a java program to implement the bfs algorithm for a graph.**
- 5. Write a java programs to implement backtracking algorithm for the N-queens problem.**
- 6. Write a java program to implement the backtracking algorithm for the sum of subsets problem.**
- 7. Write a java program to implement the backtracking algorithm for the Hamiltonian Circuits problem.**
- 8. Write a java program to implement greedy algorithm for job sequencing with deadlines.**
- 9. Write a java program to implement Dijkstra's algorithm for the Single source shortest path problem.**
- 10. Write a java program that implements Prim's algorithm to generate minimum cost spanning tree.**
- 11. Write a java program that implements Kruskal's algorithm to generate minimum cost spanning tree**
- 12. Write a java program to implement Floyd's algorithm for the all pairs shortest path problem.**
- 13. Write a java program to implement Dynamic Programming algorithm for the 0/1 Knapsack problem.**
- 14. Write a java program to implement Dynamic Programming algorithm for the Optimal Binary Search Tree Problem.**

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## **COMPUTER NETWORKS LAB(CS506PC)**

### **List of Experiments:**

- 1. Implement the data link layer framing methods such as character, character stuffing, and bit stuffing.**
- 2. Implement on a data set of characters the three CRC polynomials – CRC 12, CRC 16 and CRC CCIP .**
- 3. Implement Dijkstra's algorithm to compute the Shortest path thru a graph.**
- 4. Take an example subnet graph with weights indicating delay between nodes. Now obtain Routing table at each node using distance vector routing algorithm**
- 5. Take an example subnet of hosts. Obtain broadcast tree for it.**
- 6. Take a 64 bit playing text and encrypt the same using DES algorithm.**
- 7. Write a program to break the above DES coding**
- 8. Using RSA algorithm encrypts a text data and Decrypt the same.**

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## **SOFTWARE ENGINEERING LAB(CS507PC)**

### **1. Course management system (CMS)**

**A course management system (CMS) is a collection of software tools providing an online environment for course interactions. A CMS typically includes a variety of online tools and environments, such as:**

**An area for faculty posting of class materials such as course syllabus and handouts  
An area for student posting of papers and other assignments**

**A grade book where faculty can record grades and each student can view his or her grades**

**An integrated email tool allowing participants to send announcement email messages to the entire class or to a subset of the entire class**

**A chat tool allowing synchronous communication among class participants**

**A threaded discussion board allowing asynchronous communication among**

**Participants In addition, a CMS is typically integrated with other databases in the university so that students enrolled in a particular course are automatically registered in the CMS as participants in that course. The Course Management System (CMS) is a web application for department personnel, Academic Senate, and Registrar staff to view, enter, and manage course information formerly submitted via paper. Departments can use CMS to create new course proposals, submit changes for existing courses, and track the progress of proposals as they move through the stages of online approval.**

### **2. Easy Leave**

**This project is aimed at developing a web based Leave Management Tool, which is of importance to either an organization or a college.**

**The Easy Leave is an Intranet based application that can be accessed throughout the organization or a specified group/Dept. This system can be used to automate the workflow of leave applications and their approvals. The periodic crediting of leave is also automated. There are features like notifications, cancellation of leave, automatic approval of leave, report generators etc in this Tool.**

## **Functional components of the project:**

**There are registered people in the system. Some are approvers. An approver can also be a requestor. In an organization, the hierarchy could be Engineers/Managers/Business Managers/Managing Director etc. In a college, it could be Lecturer/Professor/Head of the Department/Dean/Principal etc.**

**Following is a list of functionalities of the system: A person should be able to**  
login to the system through the first page of the application  
change the password after logging into the system  
see his/her eligibility details (like how many days of leave he/she is eligible for etc) query the leave balance  
see his/her leave history since the time he/she joined the company/college  
apply for leave, specifying the from and to dates, reason for taking leave, address for communication while on leave and his/her superior's email id  
see his/her current leave applications and the leave applications that are submitted to him/her for approval or cancellation  
approve/reject the leave applications that are submitted to him/her  
withdraw his/her leave application (which has not been approved yet)  
Cancel his/her leave (which has been already approved). This will need to be approved by his/her Superior

get help about the leave system on how to use the different features of the system As soon as a leave application /cancellation request /withdrawal /approval /rejection /password-change is made by the person, an automatic email should be sent to the person and his superior giving details about the action  
The number of days of leave (as per the assumed leave policy) should be automatically credited to everybody and a notification regarding the same be sent to them automatically  
An automatic leave-approval facility for leave applications which are older than 2 weeks should be there. Notification about the automatic leave approval should be sent to the person as well as his superior

### **3.E-Bidding**

Auctions are among the latest economic institutions in place. They have been used since antiquity to sell a wide variety of goods, and their basic form has remained unchanged. In this dissertation, we explore the efficiency of common auctions when values are interdependent the value to a particular bidder may depend on information available only to others-and asymmetric. In this setting, it is well known that sealed-bid auctions do not achieve efficient allocations in general since they do not allow the information held by different bidders to be shared. Typically, in an auction, say of the kind used to sell art, the auctioneer sets a relatively low initial price. This price is then increased until only one bidder is willing to buy the object, and the exact manner in which this is done varies. In my model a bidder who drops out at some price can "reenter" at a higher price. With the invention of E-commerce technologies over the Internet the opportunity to bid from the comfort of one's own home has seen a change like never seen before. Within the span of a few short years, what may have began as an experimental idea has grown to an immensely popular hobby, and in some cases, a means of livelihood, the Auction Patrol gathers tremendous response every day, all day. With the point and click of the mouse, one may bid on an item they may need or just want, and in moments they find that either they are the top bidder or someone else wants it more, and you're

outbid! The excitement of an auction all from the comfort of home is a completely different experience. Society cannot seem to escape the criminal element in the physical world, and so it is the same with Auction Patrols. This is one area

where in a question can be raised as to how safe

**Auction Patrols.**

**Proposed system**

**To generate the quick reports**

**To make accuracy and efficient calculations**

**To provide proper information briefly**

**To provide data security**

**To provide huge maintenance of records**

**Flexibility of transactions can be completed in time**

#### **4. Electronic Cash counter**

This project is mainly developed for the Account Division of a Banking sector to provide better interface of the entire banking transactions. This system is aimed to give a better out look to the user interfaces and to implement all the banking transactions like:

Supply of Account Information

New Account Creations

Deposits

Withdraws

Cheque book issues

Stop payments

Transfer of accounts

Report Generations.

#### **Proposed System:**

The development of the new system contains the following activities, which try to automate the entire process keeping in view of the database integration approach.

User friendliness is provided in the application with various controls.

The system makes the overall project management much easier and flexible.

Readily upload the latest updates, allows user to download the alerts by clicking the URL.

There is no risk of data mismanagement at any level while the project development is under process.

It provides high level of security with different level of authentication