

## Advanced Programming Projects

The following is a list of projects. Please select any one that interests you. These projects are designed to test your skills in various aspects of advanced programming and are also applicable in real-world scenarios.

**1. Virtual Class Room.**

- a) J2SE
- b) J2EE

Description of the Project: This software is used for students who can read & download the lectures of faculties and faculties can upload their class lectures.

**2. Educational Search Engine.**

- a) J2EE

Description of the Project: This is an internet application where students can search for colleges of their interest.

**3. Java based image recognition software.**

- a) J2SE

Description of the Project: This software is used for analyzing an image file and matching it with other image data. Such applications are required in passport control and other security installations.

**4. Java based Supply Chain Management solution.**

- a) J2EE
- b) J2SE

Description of the Project: This is a company wide application, where the application is distributed among various departments of the company like warehouse, finance, procurement, which keeps track of the inventory levels of the company, updates the movement of goods online, provides interface to various departments and performs Just in Time management of inventory.

**5. Java based stock analysis and prediction application:**

- a) J2EE
- b) J2SE

Description of the Project: This software is a web-based application, which collects data of various selected stocks over a period of time, and produces statistics of the performance of these shares and also provides trends for the future.

This software processes stream data, - the stream data is coming continuously, quickly, changing with time, and may be unpredictable and unlimited in the way. The software updates the database continuously and performs data mining dynamically. The software extracts potential information and knowledge hidden in the stream data,

which is useful but people do not know in advance. The data to be processed is on the continuous arrival of large or even unlimited data. The data thus mined is used for stock prediction over the conceivable future.

**6. Java based Movie Ticket Reservation System:**

a) J2SE

b) J2EE

Description of the Project: This software is a reservation software. The software consists of two parts: 1) A Reservation System 2) Web-based clients. The clients can log in using a User-Id and Password. The central reservation system keeps track of the number of seats available and the tickets booked.

**7. Java based authentication module for web-services**

a) J2SE

b) J2EE

Description of the Project: This software is used at client locations for web services. The software can be used for validating the authorization of a particular user.

**8. Java based payment Gateway for online payment**

a) J2SE

b) J2EE

Description of the Project: This software interfaces with the payment gateways of various banks or financial applications. This module can be attached with any booking site on one side and the bank's payment gateway on the other side so that online payment can be incorporated into any web-site.

**9. Java based Firewalls and Network Security System:**

a) J2SE

b) J2EE

Description of the Project: This is a corporate based application, which is used for implementing Network security to ensure that users in the network cannot access unauthorized or restricted data.

**10. An end-to-end vehicle management system:**

a) J2ME

b) J2EE

Description of the Project: This Automates the process of vehicle management, it enables the tracking of vehicle and driver performances. Vehicle insurance, service due and fuel consumption can be tracked. The software to be deployed over the corporate

intranet, allows for easy scheduling of vehicles. The users of the system will be the employees of the company using the application. Access to the various modules of the application will be based on the roles assigned.

**11. Java based virtual private network:**

a) J2EE

Description of the Project: This software implements a virtual private network over the public domain.

**12. Java based Point-of-sale application:**

a) J2EE

b) J2SE

Description of the Project: This software, to be used in retail shops or malls has three modules, the front end is used at the billing counter which enters the billing details, the middle tier performs business logic, calculates amount, performs inventory management and the third layer performs database storage and retrieval.

**13. Card based payment system on Java:**

a) Java Cards

b) J2EE

Description of the Project: This software to be implemented with Java and Magnetic cards can be used for cashless payments over a closed network. Each card has a unique identity stored in its magnetic stripe. The card is used for identifying an user. A user can pay cash at one terminal where cash is accepted. The card is then swiped at a terminal, and the software enters the amount paid against the specific card. The card is then used for payment at other terminals. The outlet reads the card, checks the amount value of the card, deducts the required amount and stores the new amount for the card.

**14. Java based application for interactive TVs:**

a) J2SE

b) J2EE

Description of the Project: Interactive TVs are TVs for the future where a viewer can send data back to the content provider, thereby he/she can order programs at any time and at any place. The software resides on the content providers' side which receives such requests and fetches content from the server and sends it to the broadcaster.

**15. Java based mail software on mobiles:**

a) J2ME

b) J2EE

Description of the Project: This software provides mailing solutions from mobiles. The mails are managed by a central server. The project has tremendous real life application and is used in many mobile phones.

**16. Online exam and assessment software:**

- a) JSP
- b) MYSQL

Description of the Project: This software is used for assessment of students. Students can give exam and as well as see their result at that time. The software could also be used by recruiters for online recruitment processes and performance comparison.

**17. Payroll Solution:**

- a) JSP
- b) MYSQL

Description of the Project: This software can be used in any office for maintaining employee payment system, performance, appraisals, leaves and other benefits in a very comprehensive way.

**18. SMS Banking for Banks:**

- a) JSP, J2ME
- b) MYSQL

Description of the Project: The Short Message Service (SMS) is a GSM service to exchange text messages up to 140 byte (or 160 characters of 7 bit). The transmission of mobile-originated short messages is carried out by the short message service Center (SMSC) of the particular network operator. The SMSC is receiving the message from the mobile device and routing it to the destination device. For generating mobile-terminated short messages, it is possible that a Company or a special service provider runs an own SMSC. Thus, a bank could generate SMS from bank data like account balance or account movements and send it to the mobile device of the customer. This technique is used at SMS-banking: The customer sends an SMS with a request to the bank, and gets the desired data as an answer.

**19. Online project management:**

- a) JSP
- b) MYSQL

Description of the Project: This software is used to manage all the projects of different college's students and individuals.

**20. College management system:**

- a) Java, JSP
- b) MYSQL, MS SQL

Description of the Project: It is an integrated web application that handles various academic and non academic activities of a College/Academic Institute. The system can be accessed by every student/faculties/employees of the institution through internet connected computers or internet enabled mobile devices with the aid of his user name and password. Every user will have a customized home page with his/her profile management facilities.

**21. Employee portal:**

- a) Java, JSP
- b) MYSQL

Description of the Project: This software is used for maintaining total employee information of an Organization. Employees can view their account info and total leave which he had taken. And admin Will have total information of their employees.

**22. Appraisal tracker:**

- a) Java, JSP
- b) MYSQL

Description of the Project: Develop a software for a company supervisor to track his employee details.

**23. Attendance Tracking System:**

- a) Core Java, Applet

Description of the Project: Develop a software for a company to view employee entry time and exit time.