Class 12 Computer Science Project

# Project Title: Exam Seating Arrangement Generator

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## 1. About the Project

This project automates the generation of exam seating arrangements using Python and CSV file handling. It takes a list of student roll numbers as input and divides them into rooms with fixed seating capacities. The output is a formatted seating chart saved as a text file, making it easier to print and share for examination purposes.

## 2. Aim

To develop a Python program that generates seating charts for exams based on student roll numbers and room capacities.

## 3. Objectives

- To read student data from a CSV file  
- To allocate students to rooms with fixed capacities  
- To generate and save seating charts in a readable format  
- To provide automation in examination seating arrangements

## 4. Tools Used

• Python 3  
• CSV module  
• File Handling  
• List and Loop operations

## 5. Algorithm

Step 1: Read student roll numbers from the CSV file  
Step 2: Initialize room number and loop through students in batches based on room capacity  
Step 3: Assign students to rooms and seats  
Step 4: Write the complete seating chart to a text file  
Step 5: Display confirmation after saving

## 6. Sample Output (Text Format)

Room 1:  
 Seat 1 - Roll No: 101  
 Seat 2 - Roll No: 102  
 Seat 3 - Roll No: 103  
 Seat 4 - Roll No: 104  
  
Room 2:  
 Seat 1 - Roll No: 105  
 Seat 2 - Roll No: 106  
 Seat 3 - Roll No: 107  
 Seat 4 - Roll No: 108

## 7. Conclusion

This project is a practical tool that introduces students to file handling and algorithmic thinking. It also showcases how Python can solve administrative tasks efficiently, such as managing exam room seating arrangements.