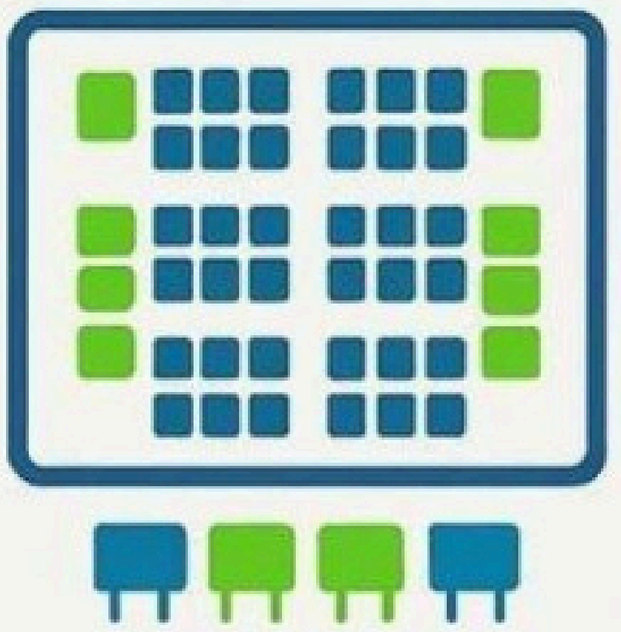
GOKARAJU RANGARAJU INSTITUTE OF ENGINEERING TECHECHNOLOGY
Department of Information Technology
Batch-A 11

SMART SEAT ALLOCATION SYSTEM

An Efficient and Automated Approach Using Optimization Algorithms

Objective

To design and implement an intelligent system that automates the allocation of student seats during project reviews, optimizing for minimal confusion, maximum resource utilization, and orderly scheduling



Methodology

Data Collection
Gather student, roject, and reviewer information

Preprocessing
Clean and organize data to eliminate conflicts

Constraint Identiflication
Define constraints like group separation, faculty availability, room capacity

Optimization Algorithm
Apply algorithms (e.g. genetic Algorithm or Greedy) for best-fit seat allocation

Result & Analysis

- Automated seat map generated with zero conflicty,
- Balanced distribution across rooms and time slots
- Time to generate ourput: ~ 2 seconds
- Improved organization and reduced manual effort

Conclusion

The smart seat allocation system provides a reliable and automated solution for **examination seating.Reducing Human error and enhancing event coordination.**

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