

# **Programming Paradigms**

PUCSD-2020

- **GUI Programing**
  - GUI vs CUI programing
  - Learn the latest framework for building the cross-device GUI's
  - Building a desktop application using latest frameworks
- **Event Driven Programing**
  - Learn the event driven programing in front-end development
  - Learn the event driven programing in back-end development
- **Architecture of typical applications**
  - Learn the typical application architectures
  - Learn the commonly used design patterns
- **Using the Database**
  - Learn the database connectivity
  - Learn the connection management
  - Learn the database high availability and scaling
  - Take care's in data manipulation's
- **Codeless Programing**
  - Monitoring using Grafana
- **Object Orientated Programing**
  - Learn the object-oriented programing concepts
- **Unit testing**
  - Learn the importance of Unit testing
- **Scripting**
  - Automation
  - Data crunching
  - Hand's on with scripting languages

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- **Assignment #1**

- Build the Hotel Automation System for Power Saving**

A very prestigious chain of hotels is facing a problem of huge consumption of electricity bills for

its electronic equipment's. The common equipment's, like lights, ACs, etc. are currently controlled manually, by the hotel staff, using manual switches. Hotel Management wants to optimize the usage of electricity consumption and also ensure that there is no inconvenience caused to the guests and staff. So, it has installed Motion Sensors at appropriate places and have approached you to program a Controller which takes inputs from these sensors and controls various equipment's.

- Assignment #2

Society Management Application

e.g. <https://mygate.com/>