



SNS COLLEGE OF ENGINEERING



Kurumbapalayam(Po), Coimbatore – 641 107

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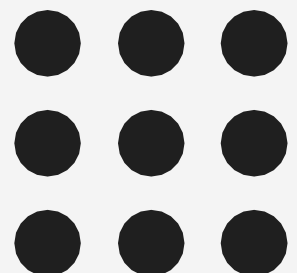
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Department of Information Technology

Course Name – Internet of Things & AI

III Year / V Semester

UNIT 2 - DESIGN METHODOLOGY





Operational View Specification

- In this step, various options pertaining to the IoT system deployment and operation are defined, such as, service hosting options, storage options, device options, application hosting options, etc.

Operational View specifications for the home automation example are as follows:

- **Devices:** Computing device (Raspberry Pi), light dependent resistor (sensor), relay switch (actuator).
- **Communication APIs:** REST APIs
- **Communication Protocols:** Link Layer - 802.11, Network Layer - 1Pv4/1Pv6, Transport TCP, Application - HTTP.



Operational View Specification



Operational View specifications for the home automation example are as follows:

Services:

- Controller Service - Hosted on device, implemented in Python and run as a native service.
- Mode service - REST-ful web service, hosted on device, implemented with Django-REST Framework.
- State service - REST-ful web service, hosted on device, implemented with Django-REST Framework.

Application:

- Web Application - Django Web Application, Application Server - Django App Server, Database Server - MySQL.



Operational View Specification



Operational View specifications for the home automation example are as follows:

Security:

- Authentication: Web App, Database Authorization: Web App, Database

Management:

- Application Management - Django App Management Database Management - MySQL DB Management, Device Management - Raspberry Pi device Management.

Operational View Specification

