MES COLLEGE OF ENGINEERING, KUTTIPPURAM
DEPARTMENT OF COMPUTER APPLICATIONS
20MCA246 - MAIN PROJECT

PRO FORMA FOR THE APPROVAL OF THE FORTH SEMESTER MAIN PROJECT

(Note: All entries of the pro forma for approval should be filled up with appropriate and complete information. Incomplete Pro forma of approval in any respect will be rejected.)

Main Project Proposal No : *(Filled by the Department)*	Academic Year : 2021-2022 Year of Admission : 2020

1. Title of the Project : IOT Server
2. Name of the Guide : Ms. Priya J D
3. Number of the Student: MES20MCA-2053
4. Student Details

Name (in BLOCK LETTERS):	Roll Number	Signature
1. SUMEEHA V ASHRAF	54	

Date: 16/04//2022

Approval Status : Approved / Not Approved

Signature of Committee Members

Comments of The Mini Project Guide — Dated Signature

Initial Submission :

First Review :

Second Review :

Comments of The Project Coordinator — Dated Signature

Initial Submission:

First Review

Second Review

Final Comments :

Dated Signature of HOD

Introduction:

This is a project for designing an IOT server to cater IOT and EDGE clients. There is no current standard for IOT protocol. Previous trend was to gather data and send data for switching using a server. IOT devices are being transformed to smarter EDGE devices.

Objectives:

To create an IOT server and design a protocol for communication between EDGE devices and servers.

Problem Definition:

Currently, vast amounts of data is sent by IOT devices which consume network and computing resources especially on data used for machine learning. Not all the data is needed in discrete form by many applications. EDGE devices can process the data to transform the data into aggregates and send it to the server.

Basic Functionalities:

The server will be able to communicate with multiple EDGE devices concurrently. Over and above the TCP/IP connection, both server and EDGE device will set aside a UDP port. TCP port will be used for communication of control and reply commands while UDP will be used for sending data and acknowledgement. The protocol will have facilities to instruct the devices as to which form of processing will be done on which type of data. Protocol will not restrict EDGE devices to handle only one type of data.
It will also have facilities for EDGE devices to report problems and status.

Tools / Platform, Hardware and Software Requirements:

HARDWARE SPECIFICATION

- Dual core or higher processor
- 4 gb ram
- 500 or higher hard disk
- Network connection with broaDband as server

SOFTWARE SPECIFICATION

Operating system : Ubuntu

Programming Language : Java 1.8