A

MAJOR PROJECT REPORT

on

HOME AUTOMATION USING GOOGLE ASSISTANT

BACHELOR OF TECHNOLOGY

in

COMPUTER SCIENCE AND ENGINEERING

Submitted by

(C-17)

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(Affiliated to JNTU-H, Approved by AICTE New Delhi and Accredited by NBA & NAAC With 'A' Grade)

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MARRI LAXMAN REDDY
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(AN AUTONOMOUS INSTITUTION)
(Approved by AICTE, New Delhi & Affiliated to JNTUH, Hyderabad)
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CERTIFICATE

This is to certify that the project report titled **"Home Automation Using Google Assistant" is** being submitted by **Jabhadey Pradeep (197y1a05e8) and Samjay Sheel.k (197y1a05g7)** in IV B.Tech II Semester **Computer Science & Engineering** is a record Bonafide work carried out by him/her. The results embodied in this report have not been submitted to any other University for the award of any degree.

Internal Guide **HOD**

Principal **External Examiner**

DECLARATION

I hereby declare that the Major Project Report entitled, **"Home Automation Using Google Assistant"** submitted for the B.Tech degree is entirely my work and all ideas and references have been duly acknowledged. It does not contain any work for the award of any other degree.

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ABSTRACT

In the midst of this rapidly evolving world of over 50 billion internet-connected devices, all new inventions are made solely from need. Today, the IoT is sweeping the world not only because it makes life easier, but because it is much more efficient. From time to time, new breakthrough technologies are created with the help of the IoT. Ultimately, people no longer have to rely on traditional machines that are slow and require more effort. This is a prototype home automation system that allows you to control everyday devices such as fans, lights, and other loads at the push of a button on the device. To enhance usage of wireless fidelity and reduce usage of sensors embedded on each appliance we introduce the usage of APIs and wireless modules. The whole project will be using API to communicate with NodeMCU and Relay module so that a machine-to-machine communication is established over WiFi and loads connected could be remotely controlled with Google's voice assistant. In this project we will be using these technologies: Embedded Systems, cross platform API named Sinric Pro is used here to integrate the working. Once the project is fully built one can control up to 4 appliances like fan, light, and any other load over WiFi via Google Voice Assistant installed on user's phone.

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SYMBOLS & ABBREVIATIONS

IDE	:	Integrated Development Environment
IOT	:	Internet Of Things
I/O	:	Input and Output
LED	:	Light Emitting Diode
SMS	:	Simple Message Service
UML	:	Unified Modeling Language
URL	:	Uniform Resource Locator
USB	:	Universal Serial Bus
FAQ'S	:	Frequently Asked Questions
NodeMCU	:	node" and "MCU" (microcontrolle
RFID	:	Radio frequency identification
NFC	:	Near Field Communication
LAN	:	Local Area Network
API	:	Application Programming Interface
IR	:	Infrared
ER	:	Entity Relationship Diagram
K-Means	:	K defines the number of pre-defined clusters
HTTP	:	Hypertext Transport (or Transfer) Protocol
MQTT	:	Message Queuing Telemetry Transport
NLP	:	Natural Language Processing
WIFI	:	Wireless Fidelity
ESP8266	:	Electronic Stability Program
SSID	:	Service set identifier

BAUD_RATE	:	baud rate (the symbol is "Bd") is unit we use to describe the "speed" of communication between the two electronic devices
	:	
SPDT relay		Single Pole Double Throw
SD (in nodemcu)	:	Secure Digital
	:	Acron(Advanced) RISC (Reduced
ARM		Instruction Set Computer) Machine
AVR	:	Automatic voice recognition
PIC	:	Peripheral Interface Controller
DSP	:	Digital Signal Processor
MSP	:	Managed Service Provider
TTL Logic	:	Transistor-Transistor Logic
WEB	:	Web is the common name for the World Wide Web