TITLE OF THE PROJECT

**SMART HOME GOOGLE ASSISTANT WITH RASPBERRY PI**

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**ABSTRACT**:

Technology in automation has reached its peak in the 21st century. Smart devices like Google Assistants have been automating many actions by controlling smart devices at homes, such as smart TVs, AC etc. This project demonstrates the automation of other important home appliances such as lights, fans etc .Using customised voice commands to google assistant. Here, in this project we install the google assistant in the Raspberry Pi and integrate the home appliances to the pi.

**OBJECTIVE**:

This project installs the Google Assistant in the Raspberry Pi and trains the Google Assistant with new voice commands. All the home appliances to be controlled are integrated with the Raspberry Pi.

**SCHEMATIC DIAGRAM**:

**DESCRIPTION**:

In the era of Automation,smart homes are the one of the demanding aspects in technology. Here the Google Assistant can be used to contol the home appliances through voice commands. One can control the light , fan ,tv , AC etc devices just by saying respected commands to google assistant.

To communicate with the devices we need a controller devices which could integrate both the Software and Hardware..

Components required for this project are:

**Hardware components – Software components –**

\*Raspberry pi 3 model B \* Raspbian linux OS

\*Ethernet cable \*VNC viewer

\*Speakers \*Google Assistant

\*USB microphone \*Dialogflow

Here Raspberry pi could do this task, it needs to be installed with Google Assistant application which is available in the “Google sdk” website. The Google Assistant API could be installed from here for Raspberry pi platform by following the mentioned steps there,

By completing the google cloud account steps .the respective cliend id and other credentials are saved in the installation process. Thus, now the API service is enabledand the sample code is tested .Using the “Dailogflow” new commands are trained to the respective Google account Assistant.

The one important aspect is WIFI connection for the Raspberry Pi. Apart from home automation Google Assistant will be having all the other features which are provided by the Google like playing music,news ,facts , entertainment etc.

**SCOPE:**

* Reduces human effort
* Ease of use
* Low maintainance required
* Feasible to almost all home

This project can be implemted in real time home devices using Relays to the Raspberry pi .Any command modifications are possible by the end user to the Google Assistants to contol devices.

**CONCLUSION:**

This project is the demonstration of the prototype of Smart Home

Using Google Assistant by voice commands. This project can be customized further for real time modifications.