

VOICE ENABLED HOME AUTOMATION USING PI PICO AND BLUETOOTH

AIM:

Design and Development of Voice enabled Home automation using Pi pico and Bluetooth.

PURPOSE:

There are several home automation systems are available in market. Wireless technologies like IR, RF and zigbee are currently widely used for automation systems. But these kind of systems need transmitter remote. Carrying these remotes to all the places around the room in not convenient. To solve this issue we proposed android based smart home automation system. Using this system we can control home appliances with voice commands from mobile application. Here project title is voice enabled home automation using pi pico and Bluetooth.

DESCRIPTION:

Raspberry pi pico interface with Bluetooth (HC-05) through UART port. Two relays connected to Pi pico digital pins.

WORKING:

Using this project we can control home appliances like fan and light with voice commands. There is app in smart mobile that AMR voice app. AMR voice app can convert voice commands to text. This text commands already in firmware. When user speaks voice commands then app sends text format to Bluetooth module. Bluetooth module sends this command to pico. Based on this command fan and light will on and off respectively. Also light fan ON and OFF status will display on 16x2 LCD display.

TECHNICAL SPECIFICATIONS:

HARDWARE:

Microcontroller	:	Raspberry pi pico
LCD	:	16X2 LCD
Relay	:	12V DC
Bluetooth	:	HC-05
Fan	:	12V DC
Light	:	230V AC
Power Source	:	12v 1 amp DC Adaptor

SOFTWARE:

Arduino IDE

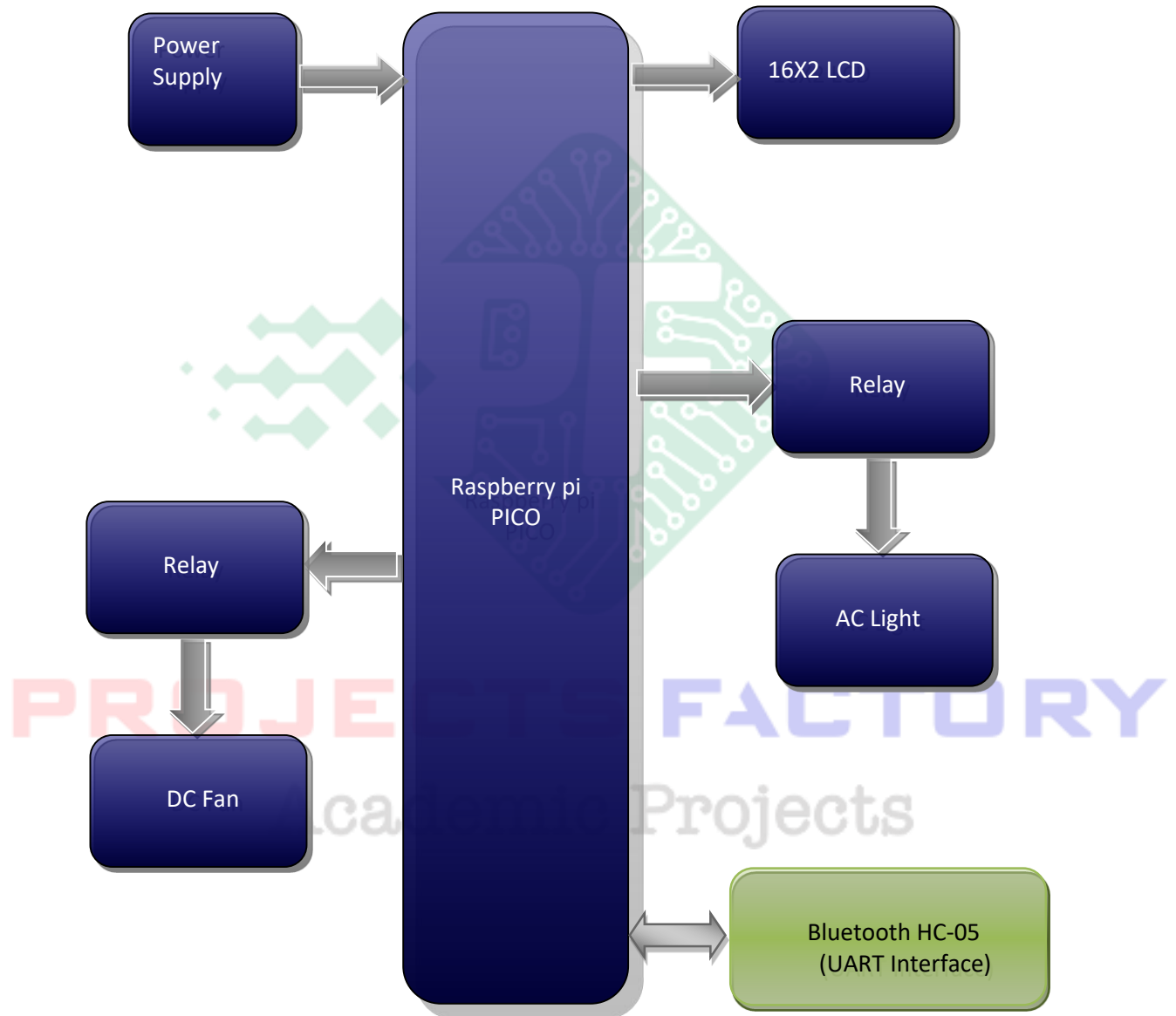
Proteus based circuit diagram

APPLICATIONS:

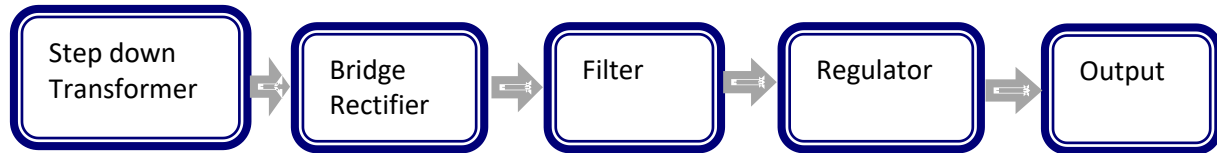
- Home automation
- Home Appliances control

PROJECTS FACTORY
Academic Projects

BLOCK DIAGRAM:



POWER SUPPLY BLOCKDIAGRAM:



INTERFACES COVERED:

- We have covered raspberry pi pico programming
- Module interface like bluetooth module (HC-05)



PROJECTS FACTORY
Academic Projects