BLUETOOTH ANDROID BASED PET FEEDER

AIM:

Design and Development of Bluetooth android based pet feeder.

PURPOSE:

Pet feeders are electronic systems that can deliver food based on time intervals. In market there are two kinds of pet feeders. Normal type pet feeders are manual based and pet needs to press button. We have to train pet accordingly. But smart pet feeders are time based and they can release food based on time alarms. Here we want to develop Bluetooth android based pet feeder with Arduino microcontroller.

DESCRIPTION:

Servo motor and Bluetooth modules are connected to Arduino digital and serial pins respectively. Water pump controller by relay and relay connected to Arduino digital pin.

RTC module DS1307 interfaced to Arduino I2C port.

WORKING:

We can set feeding alarms from Bluetooth App. This Bluetooth app could be android based supported by any smart mobile. We can set up to 9 feeding alarms per day. Servo motor opens and close feeding tub cap to release food. When particular feeding alarm trigger then cap will open and then close after 2secs. Also water will dispense into another tub. Buzzer will be ON while any feeding alarm triggers. This will indicates to pet that alarm going to be trigger. All this information displaying on LCD display.

TECHNICAL SPECIFICATIONS:

HARDWARE:

Microcontroller	:	Arduino Uno
Crystal	:	16 MHz
LCD	:	16X2 LCD
Bluetooth Module	:	HC-05
Motor	:	Servo DC 5V
Relay	:	12V DC
Water Pump	:	AC submersible 230V
RTC	:	DS1307
Power Source	:	12v 2 amp Adaptor

SOFTWARE:

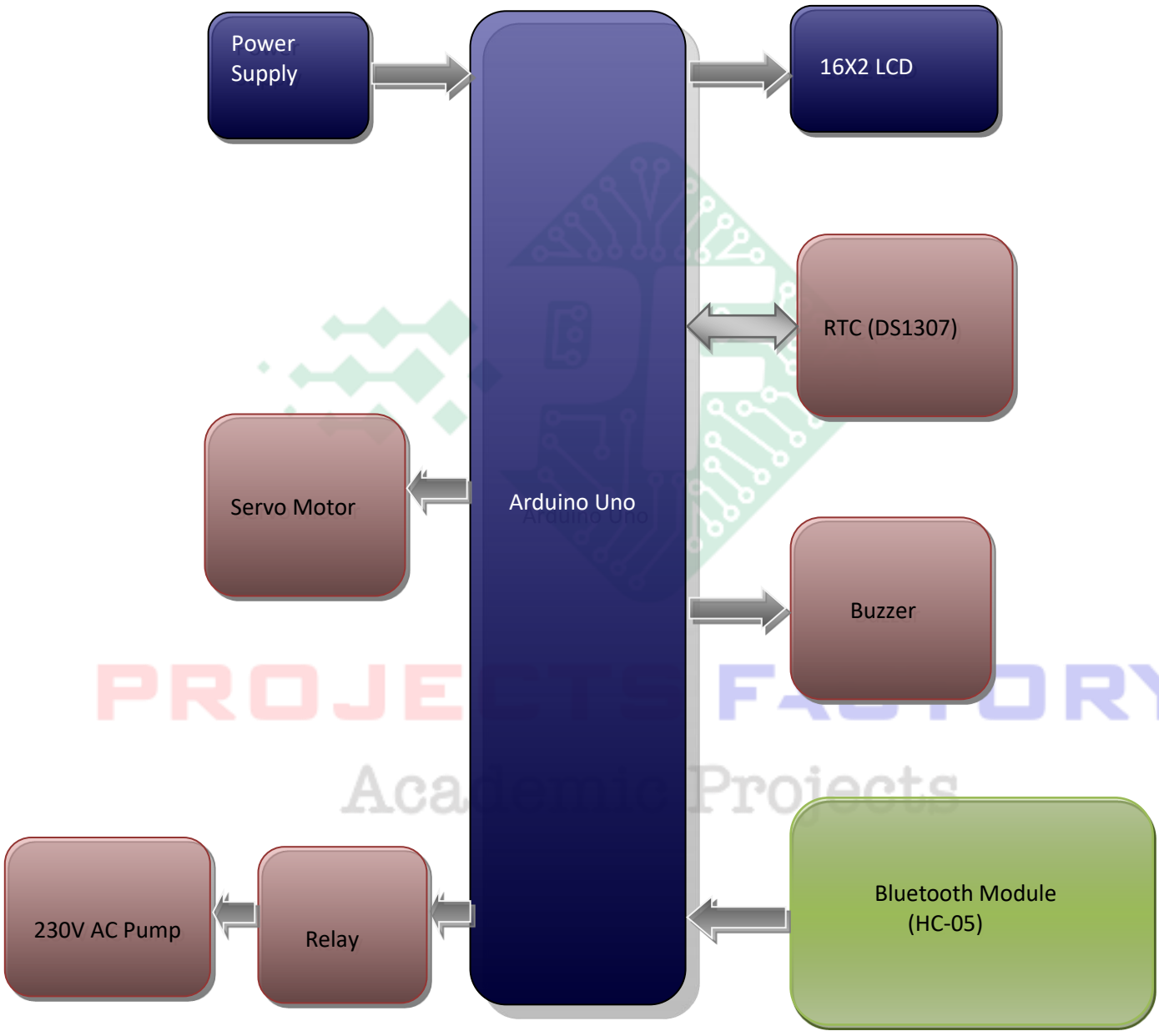
Arduino IDE

Proteus based circuit diagram

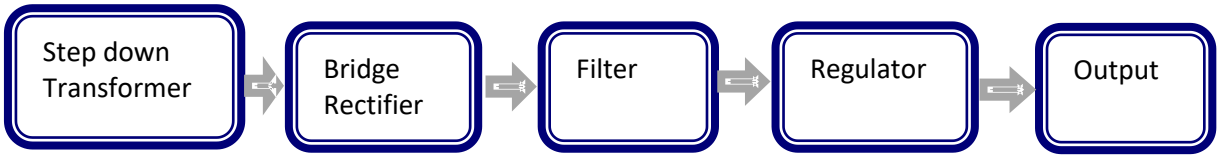
APPLICATIONS:

- Pet Feeding System
- Cat feeder
- Dog feeder
- Wireless pet feeder

BLOCK DIAGRAM:



POWER SUPPLY BLOCKDIAGRAM:



INTERFACES COVERD:

- We have covered Bluetooth module (HC-05) Interfacing
- RTC module, Servo motor and AC pump interface