RoboFever Kit Manual

Project 1 : Blinking Leds

Hardware requirements :

1. Arduino uno
2. Set of male to female jumper wires
3. Arduino programing cable

Wire Assembly Guide:

Step 1: Connect long leg of led to female side of red jumper wire (Red color wire is used to power input) connect short leg of led to female leg of black jumper wire (black color wise specify ground connection).

Step 2: Connect Red jumper wire to digital pin 6 on Arduino Uno and black jumper wire to ground pin of Arduino uno (pls refer below picture to understand better).

Step 3: Connect Arduino uno to computer using Arduino uno programing cable.

Step 4 : Open Arduino Ide in your computer Start a new project (File/New\_Project)

Name it as Led project.

Now we are ready to start programing :

So follow below steps for programing

1p: Pin declaration: use command pinMode(6,OUTPUT); (here 6 refer to the pin where red jumper wire is connected and Output refer when you are giving some command to the device like on/off).

2p: In Void Loop we declare all the logic which are system needs to perform repetitively so we want to blink led connected on pin no 6 so we will use

digitalWrite(6,HIGH);

delay(1000):

digitalWrite(6,LOW);

delay(1000):

So in above code we can see we have used digitalWrite function this function takes first argument as pin number and second argument as what operation you want to perform.

Delay is used to provide some time between on/off so we can easily see the change.

3p) Now we are ready with are code so next step is to save the code u can use crlt+s to save the code or you can go in files and select save option

4P) Now as we completed saving now the most important task is to upload the code to arduino board for that we first need to follow some pre-checks as follow:

1. Comport selection: go in task bar select option you will find com option in drop-down go in com you will see option of arduino there select that comport and click on upload.

So now just setback and wait till the code get successfully uploaded.

We just completed first project.

Project 2: Line Following Robot:

Hardware requirements:

1)Arduino uno

2) Robofever Sheld

3) Robofever Ir sensor module \*2

4) 5v Battery

5)Robofever Robot Chassis

Wiring and Assembly :

Step 1) Follow below picture demonstration for body assembly

//add chassis assembly step by step photos

Step 2) connect Robofever shield with Arduino uno as show in below picture demonstration (pls be careful not to damage shield pins)

//add shield and Arduino connection photos

Step 3) connect IR Sensor to the slot provided on shield (please refer photos in below).

//Add ir sensor connection photos

Step 4) now next step need to be executed after code is upload and we are ready for testing here we connect battery to the Arduino board (please refer below photos)

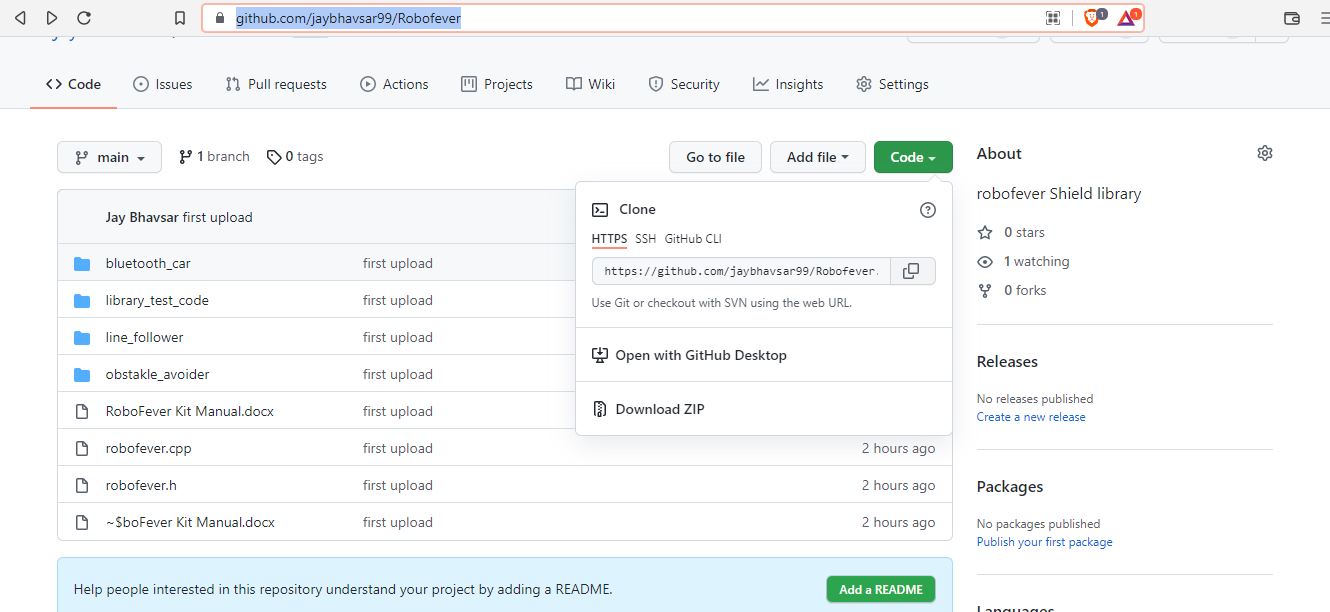
//Add battery connection image

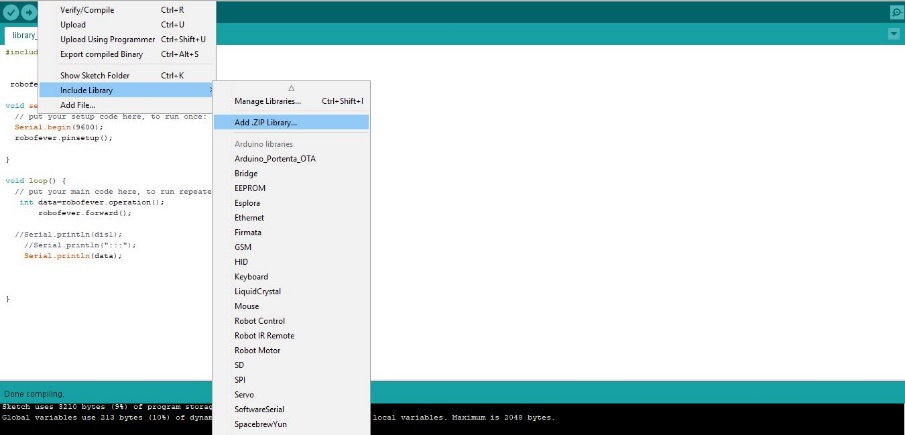
Software assembly:

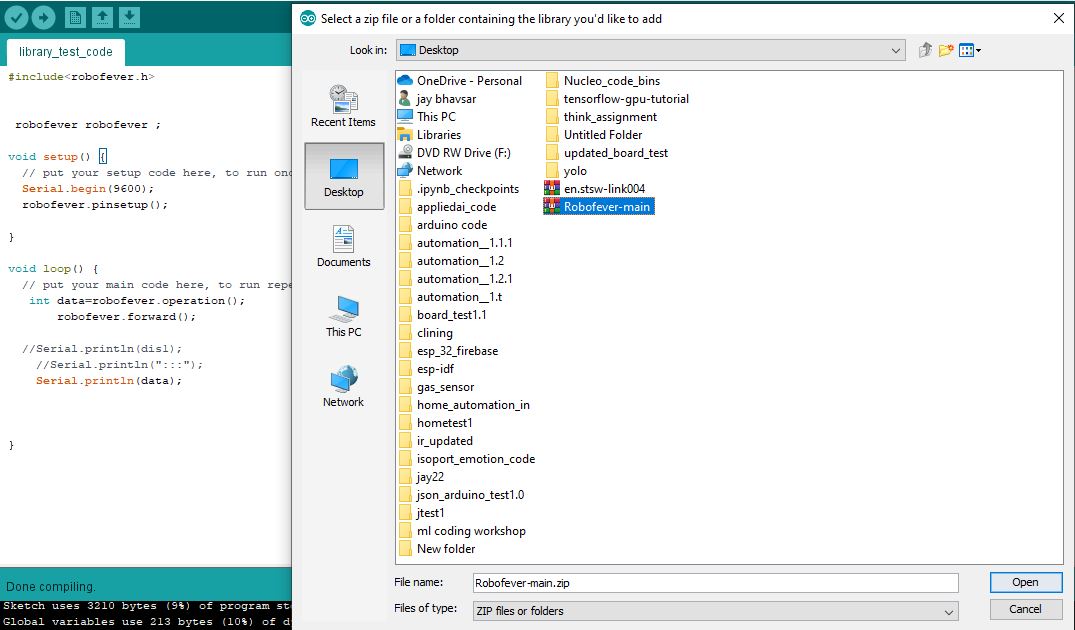
1. Initial environment setup: open Arduino ide and setup com port in upload section in task-bar (select option with Arduino)

// add photos

1. Library Setup :
   1. Go to <https://github.com/jaybhavsar99/Robofever> and click on code option then on download zip file save the zip file in desktop .



* 1. After downloading zip file save it on desktop and then open arduino ide and select Sketch in taskbar >Include library>add zip file
  2. 
  3. Now select library zip file saved on desktop as shown below



Now library is successfully installed lets start coding

// add photos

1. Code file/explanation

// here we need to add code explanation

ghp\_cccX6MqspK8f4Z8kohTN5iItRewCHW34wlxD

1. Code debug and upload:
   1. To upload: connect arduino programing wire to arduino and then to computer > press upload button and code will start uploading
   2. Expected error:
      1. Robofever library not found: this means your library is not properly installed redo library installation process.

Project 3: obstacle avoider Robot:

Hardware requirements:

1)Arduino uno

2) Robofever Sheld

3) Robofever Ultrasonics Sensor

4) 5v Battery

5)Robofever Robot Chassis

Wiring and Assembly :

Step 1) Follow below picture demonstration for body assembly

//add chassis assembly step by step photos

Step 2) connect Robofever shield with Arduino uno as show in below picture demonstration (pls be careful not to damage shield pins)

//add shield and Arduino connection photos

Step 3) connect Ultrasonic sensor to the slot provided on shield (please refer photos in below).

//Add ultrasonic sensor connection photos

Step 4) now next step need to be executed after code is upload and we are ready for testing here we connect battery to the Arduino board (please refer below photos)

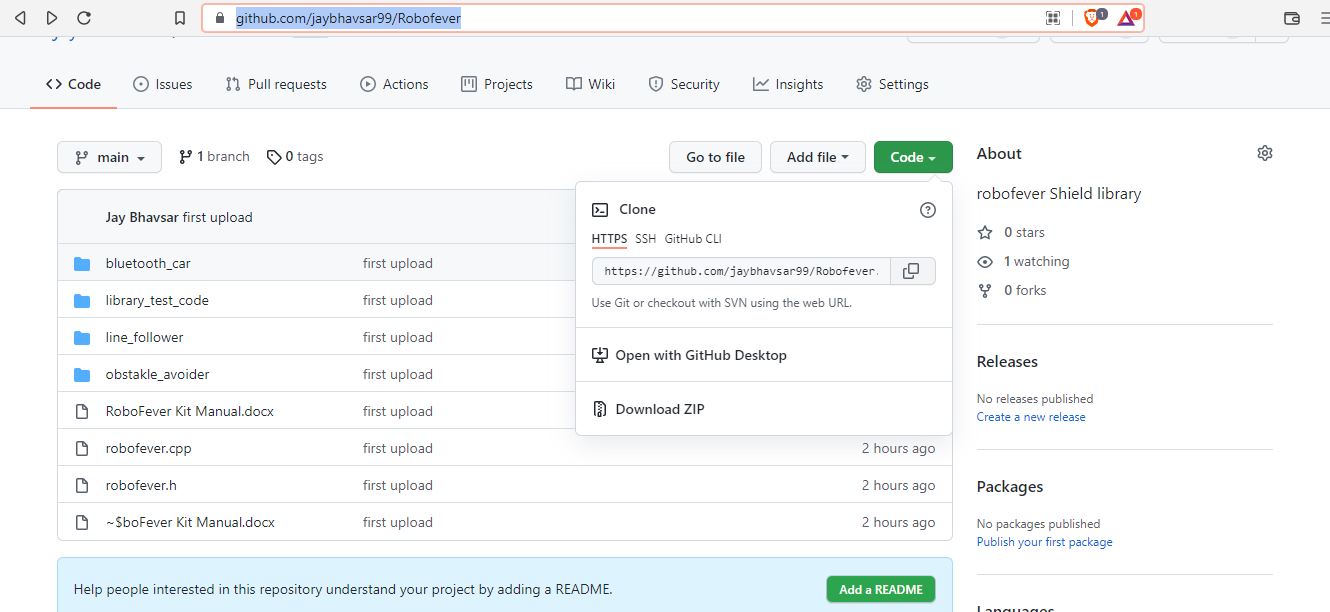
//Add battery connection image

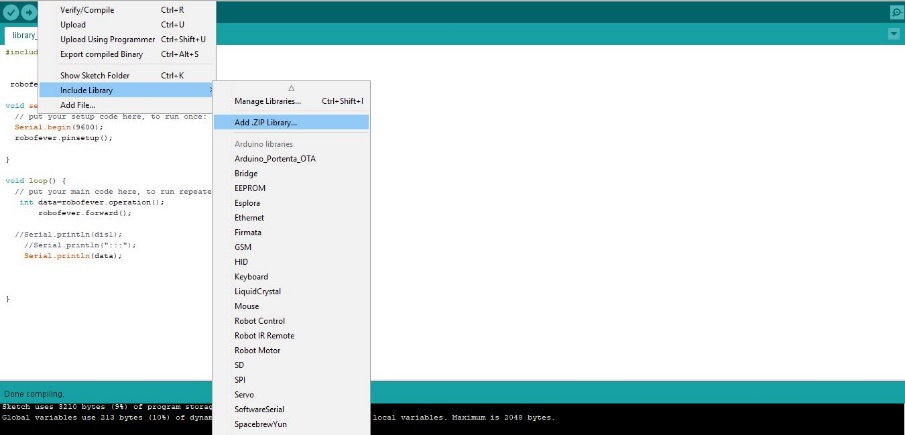
Software assembly:

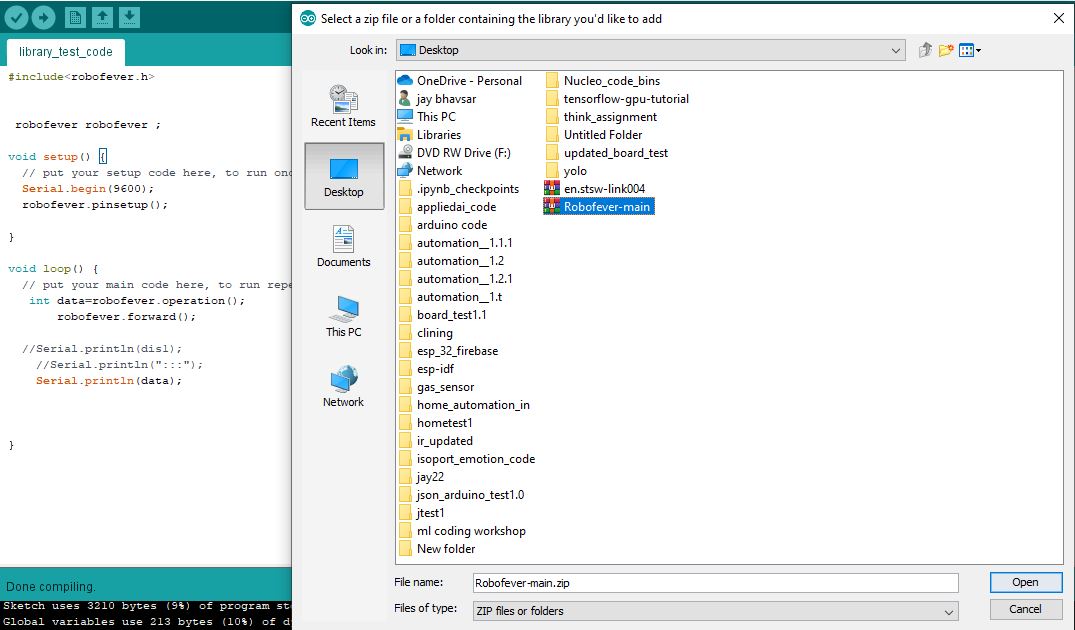
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Now library is successfully installed lets start coding

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Project 4: Bluetooth control Robot:

Hardware requirements:

1)Arduino uno

2) Robofever Sheld

3) Robofever Ultrasonics Sensor

4) 5v Battery

5)Robofever Robot Chassis

App requirement : Please download the app from provided link

Wiring and Assembly :

Step 1) Follow below picture demonstration for body assembly

//add chassis assembly step by step photos

Step 2) connect Robofever shield with Arduino uno as show in below picture demonstration (pls be careful not to damage shield pins)

//add shield and Arduino connection photos

Step 3) connect Bluetooth sensor to the slot provided on shield (please refer photos in below).

//Add Bluetooth sensor connection photos

Step 4) now next step need to be executed after code is upload and we are ready for testing here we connect battery to the Arduino board (please refer below photos)

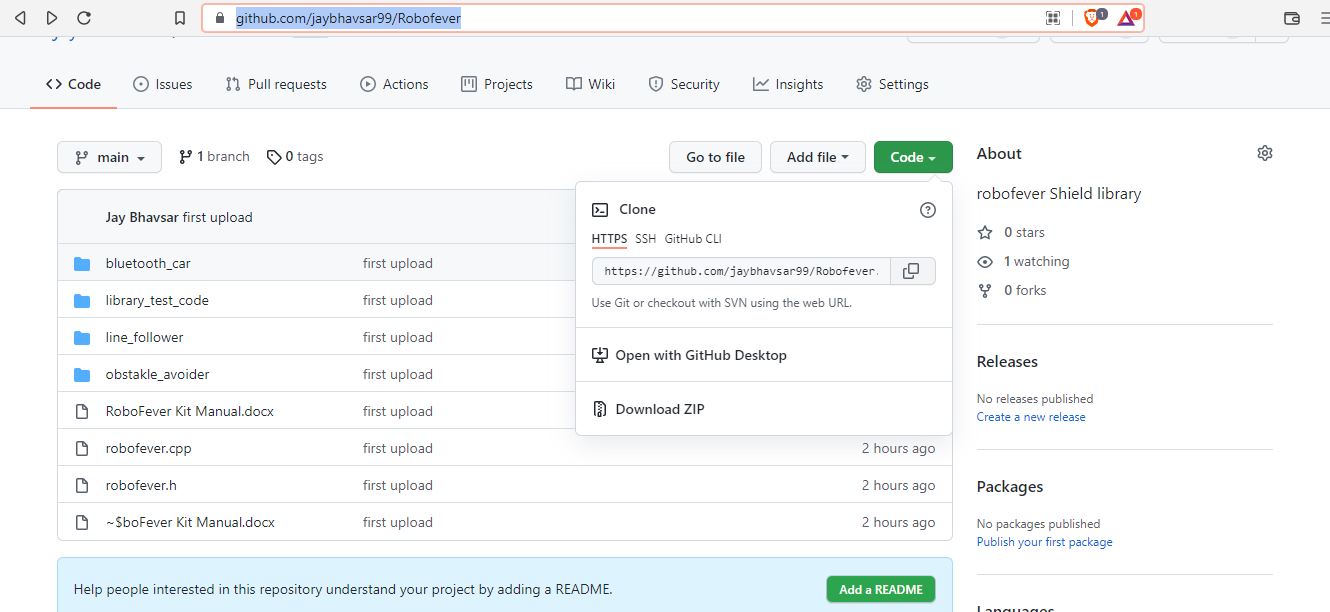
//Add battery connection image

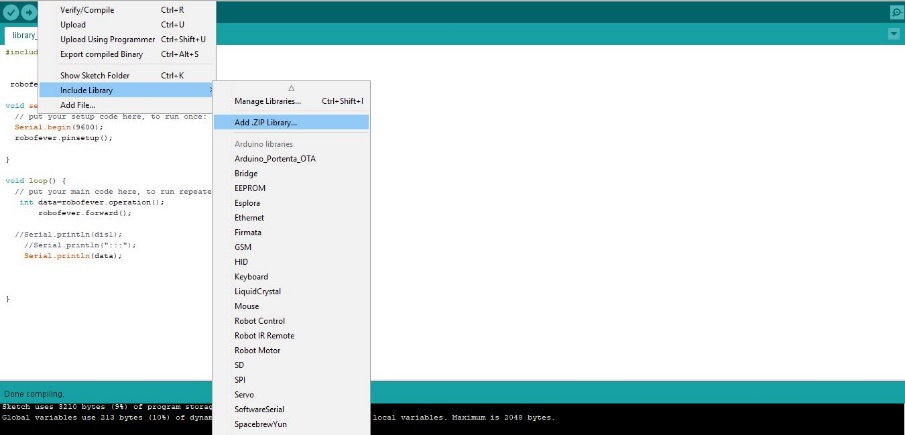
Software assembly:

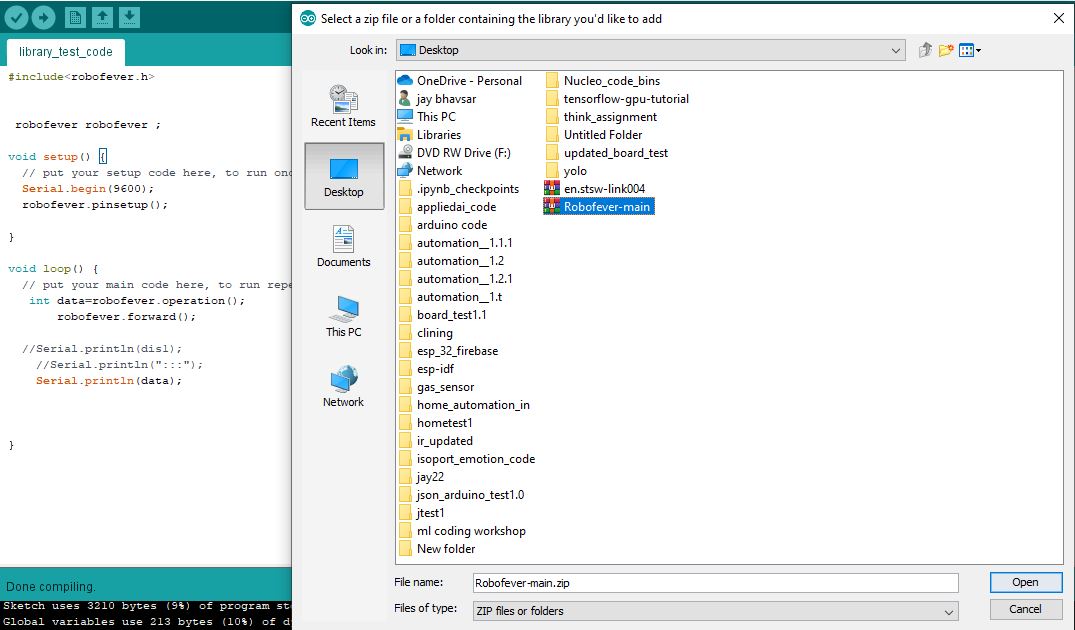
1. Initial environment setup: open Arduino ide and setup com port in upload section in task-bar (select option with Arduino)

// add photos

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   1. Go to <https://github.com/jaybhavsar99/Robofever> and click on code option then on download zip file save the zip file in desktop .



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Now library is successfully installed lets start coding

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1. Code file/explanation

// here we need to add code explanation

ghp\_cccX6MqspK8f4Z8kohTN5iItRewCHW34wlxD

1. Code debug and upload:
   1. To upload: connect arduino programing wire to arduino and then to computer > press upload button and code will start uploading
   2. Expected error:
      1. Robofever library not found: this means your library is not properly installed redo library installation process.
      2. Code not getting upload (board not found error) to overcome this error please remove your Bluetooth sensor while uploading code >after code is successfully uploaded the again connect the Bluetooth sensor in its slot