**PROJECT 1**

**Blake’s Basket ball counter**

**Student 1:** Good morning /good afternoon. My name is (student's name) and I am studying in grade (Student's grade).

Our project is Blake’s Basket ball counter. The aim of this project is to learn how the automatic counters work in real world, here we are using it in basket ball to get the count .In this project we have build Basket ball counter by using the following components. The components which we have used for building the base are five hole pillar, I block, 45 degree block, T connector, connector and L block.

The other components which we used for building the project will be explained by my friend.

**Student 2:** My name is (student's name). I am going to explain the other components which we used in the project. They are:

* Qbrick or motherboard
* Registered Jack(RJ) cables
* IR Sensor
* RGB led

My friend will be explaining you the working of the project.

**Student 3:** My name is (student's name). I will be explaining you the working of the project. This is the Qbrick or motherboard which is the brain /processing unit of the project. The Qbrick has a button by which we can on and off. From the Qbrick the power flows to all other components, it sends the signal and receives the signal from sensors, when ever the IR sensor detects the objects near by it sends the signal to the Qbrick, the Qbrick process it according to the program written and takes decision to give a point or not.

My friend will be showing, working of the project.

**Student 4:** My name is (student's name). We connect the Qbrick and android phone via bluetooth. We can read the count of the balls falling into the basket as the sensor sends a signal to Qbrick by sensing and increase the point .

(Demonstration)

**PROJECT 2**

**Samuel’s SMART GOGGLES**

**Student 1:** Good morning /good afternoon. My name is (student's name) and I am studying in grade (Student's grade).

Our project is smart goggles. The aim of the project is to learn about ultrasonic sensor which can be used in different areas, In this project we have build smart goggles by using the following components. The components which we have used for building the goggles are five hole pillar, I block, 45 degree block, T connector, connector and L block.

The other components which we used for building the project will be explained by my friend.

**Student 2:** My name is (student's name). I am going to explain the other components which we used in the project. They are:

* Qbrick or motherboard
* Registered Jack(RJ) cables
* Ultrasonic sensor and
* Buzzer.

My friend will be explaining you the working of the project.

**Student 3:** My name is (student's name). I will be explaining you the working of the project. This is the Qbrick or motherboard which is the brain /processing unit of the project. The Qbrick has a button by which we can on and off. From the Qbrick the power flows to all other components. The ultrasonic sensor and buzzer is connected to programmable ports. When ever ultrasonic sensor detects the objects in its range it sends the signal to the Qbrick and it will turn on the buzzer. Here we are using ultrasonic sensor to detect the objects in front for the blind people if they wear these goggles they can warned about the objects in front of them.

Applications are: used self-parking and anti-collision system

My friend will be showing, working of the project.

**Student 4:** My name is (student's name). We connect the Qbrick and android phone via bluetooth

This is our project. Thank you.

(Demonstration)

**PROJECT 3**

**Lyanna’s**

**REMOTE CONTROL (RC) CAR WITH HEADLIGHTS**

**Student 1:** Good morning /good afternoon. My name is (student's name) and I am studying in grade (Student's grade).

Our project is remote control (RC) car with headlights. The aim of the project is to learn how we are able to control the car by using remote. In this project we have build remote control car by using the following components. The components which we have used for building the base are five hole pillar, I block, 45 degree block, T connector, connector and L block.

The other components which we used for building the project will be explained by my friend.

**Student 2:** My name is (student's name). I am going to explain the other components which we used in the project. They are:

* castor wheel
* wheels
* Direct current(DC) motor
* Qbrick or motherboard
* Registered Jack(RJ) cables and
* Light Emitting Diode (LED).

My friend will be explaining you the working of the project.

**Student 3:** My name is (student's name). I will be explaining you the working of the project. This is the Qbrick or motherboard which is the brain processing unit of the remote control (RC) car. The Qbrick has a button by which we can on and off. From the Qbrick the power flows to all other components. We connect the Direct current (DC) motors to Qbrick at m1 and m2 ports and Light Emitting Diode (LED)'S at programmable ports. we connect the RC car to android mobile via bluetooth. We control car by using android phone application.

My friend will be showing, working of the project.

**Student 4:** My name is (student's name). We connect the Qbrick and android phone via bluetooth, we click on connect in app and we pick up the device (Qbrick) by using the id(QR code), once it is connected we can control the car

(Demonstration)

This is our project. Thank you.

**PROJECT 4**

**Aaron Automatic Street light**

**Student 1:** Good morning /good afternoon. My name is (student's name) and I am studying in grade (Student's grade).

Our project is smart goggles. The aim of the project is to learn about LDR sensor, which we use in street light for automatic on during nights and automatic off during day. We have build Aaron Automatic street light by using the following components. The components which we have used for building the structure are five hole pillar, I block, 45 degree block, T connector, connector and L block.

The other components which we used for building the project will be explained by my friend.

**Student 2:** My name is (student's name). I am going to explain the other components which we used in the project. They are:

* Qbrick or motherboard
* Registered Jack(RJ) cables
* LDR(Light Dependent Resistor) SENSOR and
* LED (Light Emitting Diode).

My friend will be explaining you the working of the project.

**Student 3:** My name is (student's name). I will be explaining you the working of the project. This is the Qbrick or motherboard which is the brain processing unit of the project. The Qbrick has a button by which we can on and off. From the Qbrick the power flows to all other components and it receives the signal input too. We connect the LED and LDR at the programmable ports of Qbrick, the LDR sensor detects the light and sends the signal to Qbrick ,Qbrick will turn on the led based on the input if it is dark it will turn on, if there is light based on the set resistance it will turn off

My friend will be showing, working of the project.

**Student 4:** My name is (student's name). We connect the Qbrick and android phone via bluetooth. We can observe the phone to understand the changes in light value which is detected by LDR sensor.

This is our project. Thank you.

(Demonstration)

**PROJECT 5**

**Diana Door alarm**

**Student 1:** Good morning /good afternoon. My name is (student's name) and I am studying in grade (Student's grade).

Our project is **Diana Door alarm**. The aim of the project is to learn about IR sensor and how real time automatic alarms work and how do automatic doors work, this project we have build Diana Door alarm by using the following components. The components which we have used for building the base are five hole pillar, I block, 45 degree block, T connector, connector and L block.

The other components which we used for building the project will be explained by my friend.

**Student 2:** My name is (student's name). I am going to explain the other components which we used in the project. They are:

* Qbrick or motherboard
* Registered Jack(RJ) cables
* IR(Infrared Radiation) sensor and
* Buzzer
* Servo Motor

My friend will be explaining you the working of the project

**Student 3:** My name is (student's name). I will be explaining you the working of the project. This is the Qbrick or motherboard which is the brain /processing unit of the project. The Qbrick has a button by which we can on and off. From the Qbrick the power flows to all other components. When ever the IR sensor detects an object in its range it sends the signal to the Qbrick/ motherboard this will send the signal to the buzzer and buzzer makes sound, it also send the signal to door to open if we click on open door button on the remote app in the mobile.

My friend will be showing, working of the project.

**Student 4:** My name is (student's name). We connect the Qbrick and android phone via bluetooth. We open the app and click on connect and select the id of the Qbrick once we get the alert that it is connected we can control our door and also we can see the IR value change in the remote which will cause the buzzer to activate.

This is our project. Thank you.

(Demonstration)

**PROJECT 6**

**Unnova Uni-light follower**

**Student 1:** Good morning /good afternoon. My name is (student's name) and I am studying in grade (Student's grade).

Our project is Uni-light follower. The aim of the project is to learn about the LDR Sensor how it can be used in applications here we are using it to detect the light and follow it during the dark time .we have build Uni-light follower by using the following components. The components which we have used for building the base are five h  
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9849890-ole pillar, I block, 45 degree block, T connector, connector and L block.

The other components which we used for building the project will be explained by my friend.

**Student 2:** My name is (student's name). I am going to explain the other components which we used in the project. They are:

* Qbrick or motherboard
* Registered Jack(RJ) cables
* LDR(Light Dependent Register)
* DC motors
* castor wheel
* wheels

My friend will be explaining you the working of the project.

**Student 3:** My name is (student's name). I will be explaining you the working of the project. This is the Qbrick or motherboard which is the brain /processing unit of the project. The Qbrick has a button by which we can on and off. From the Qbrick the power flows to all other components, when ever the LDR detects the light it starts to send the signal to Qbrick, LDR (light dependent resistor) will respond to sunlight, once the signal comes to Qbrick it responds to the signal according to signal, the Qbrick sends the signal to motors to move

, the real-time applications can be: alarms, street lights.

My friend will be showing, working of the project.

**Student 4:** My name is (student's name). We connect the Qbrick and android phone via bluetooth.

This is our project. Thank you.

(Demonstration)

**PROJECT 7**

**Suzie’s Smart Tap**

**Student 1:** Good morning /good afternoon. My name is (student's name) and I am studying in grade (Student's grade).

Our project is smart tap. The aim of the project is to understand how real-time smart taps work. In this project we have build smart tap by using the following components. The components which we have used for building the base are five hole pillar, I block, 45 degree block, T connector, connector and L block.

The other components which we used for building the project will be explained by my friend.

**Student 2:** My name is (student's name). I am going to explain the other components which we used in the project. They are:

* Qbrick or motherboard
* Registered Jack(RJ) cables and
* Infrared Radiation(IR) sensor
* Pump motors.

My friend will be explaining you the working of the project.

**Student 3:** My name is (student's name). I will be explaining you the working of the project. This is the Qbrick or motherboard which is the brain processing unit of the project. The Qbrick has a button by which we can on and off. From the Qbrick the power flows to all other components. We connect the Infrared radiation (IR) sensor to programmable port and pump motor to either m1 or m2 ports.

My friend will be showing you the working.

**Student 4**: My name is (student's name). We connect the Qbrick and android phone via bluetooth. The Infrared radiation (IR) sensor senses certain characteristics of its surroundings. It does this by either emitting or detecting infrared radiation. It has a Transmitter (TX) and a Receiver (RX). The transmitter transmits IR rays and the receiver receives reflected IR rays when an object is detected the value which we can observe on the phone. The IR sensor sends the signal to the Qbrick and the Qbrick turns the pump motor on. The motor pumps water out.

This is our smart tap project. Thank you.

(Demonstration)

**PROJECT 8**

**Caroline’s voice controlled RGB**

**Student 1:** Good morning /good afternoon. My name is (student's name) and I am studying in grade (Student's grade).

Our project is voice controlled RGB. The aim of project is to learn how we can control the led using the voice . We have built voice controlled RGB by using the following components. The components which we have used for building the base are five hole pillar, I block, 45 degree block, T connector, connector and L block.

The other components which we used for building the project will be explained by my friend.

**Student 2:** My name is (student's name). I am going to explain the other components which we used in the project. They are:

* Qbrick or motherboard
* Registered Jack(RJ) cables
* Android phone and
* RGB LED.

My friend will be explaining you the working of the project.

**Student 3:** My name is (student's name). I will be explaining you the working of the project. This is the Qbrick or motherboard which is the brain /processing unit of the project. The Qbrick has a button by which we can on and off. From the Qbrick the power flows to all other components. Here we use android phone mic as input we connect the android phone to Qbrick once we connect it with the app via bluetooth we can say to “turn on red light”, the input from the phone sends a signal the Qbrick via bluetooth the Qbrick turns on the RED LED, according to the command.

My friend will be showing, working of the project.

**Student 4:** My name is (student's name). We connect the Qbrick and android phone via bluetooth. Once we open our phone we need to connect with bluetooth and open the app click on connect, select the Qbrick id. once its is connected it will show us connected message, then we need to click on speak and say “turn on red light”/ “turn on blue light”/ “turn on green light”.

This is our project. Thank you.

(Demonstration)

**PROJECT 9**

**Obstacle avoider**

**Student 1:** Good morning /good afternoon. My name is (student's name) and I am studying in grade (Student's grade).

Our project is Obstacle avoider. we have build Obstacle avoider by using the following components. The components which we have used for building the base are five hole pillar, I block, 45 degree block, T connector, connector and L block.

The other components which we used for building the project will be explained by my friend.

**Student 2:** My name is (student's name). I am going to explain the other components which we used in the project. They are:

* Qbrick or motherboard
* Registered Jack(RJ) cables
* Ultrasonic sensor and
* Dc motors.
* castor wheel
* wheels

My friend will be explaining you the working of the project.

**Student 3:** My name is (student's name). I will be explaining you the working of the project. This is the Qbrick or motherboard which is the brain /processing unit of the project. The Qbrick has a button by which we can on and off. From the Qbrick the power flows to all other components. The ultrasonic sensor detects the objects with its range and tries to turn away as the ultrasonic sensor send the signal to the Qbrick the Qbrick will send the signal to motors to turn away into other direction according to the program , this can be used in automatic robots to detect the objects near by ,also in vehicles to avoid crashing into people or walls.

My friend will be showing, working of the project.

**Student 4:** My name is (student's name). We connect the Qbrick and android phone via bluetooth. Once we open our phone we need to connect with bluetooth and open the app click on connect ,select the Qbrick id . once its is connected it will show us connected message ,the we can see the change it ultrasonic sensor values as well as the vehicle moves automatically and turn left or right once if it detects an obstacle .

This is our project. Thank you.

(Demonstration)