***THEORY***:-

**BLUETOOTH-** Bluetooth is a wireless technology standard for exchanging data between fixed and mobile devices over short distances using short wavelength UHF radio waves I the industrial, scientific and medical radio bands, from 2.400 to 2.485 GHz and building personal area networks. It has 5 pins Tx, Rx, STATE, GND and EN. And every pin has its different role.

**ARDUINO-** The **Arduino Uno** is an open-source microcontroller board. The board is equipped with sets of digital and analog input/output (I/O) pins that may be interfaced to various expansion boards (shields) and other circuits. The board has 14 Digital pins, 6 Analog pins, and programmable with the Arduino IDE (Integrated Development Environment) via a type B USB cable. It can be powered by the USB cable or by an external 9-volt battery, though it accepts voltages between 7 and 20 volts.

***Concept Used : -***

A circuit is made using Bluetooth and arduino. Tx of Bluetooth is connected to 0 of arduino. Ground of Bluetooth is connected to ground of arduino. And VCC(high voltage) is connected 5V of arduino.

***Learning and Observations : -***

* Making circuits using Arduino and bluetooth.
* Connecting Bluetooth to arduino.
* Ground is connected to ground.
* Signals are transmitted from Bluetooth to arduino.
* Bluetooth receives the signals by Rx(0).
* Coding to be done on Arduino.exe for stimulation of the experiment.

***Problems & Troubleshooting: –***

No problem occurred during the execution of the experiment.

***Precautions :–***

1. The circuit made can be wrong.
2. Any Element used may be defective.
3. The coding done can be incorrect due to which stimulation can be failed.
4. Port Selection for Arduino can be incorrect due to which it won’t upload on Arduino Board and resulting in failure of experiment.

***Learning Outcomes: –***

1. Setting up circuit on a Arduino.
2. Connecting bluetooth and Arduino.
3. Using Tx and Rx.
4. Working and coding of Arduino.

***Result: –***

Working of Bluetooth and arduino is verified after uploading the program.