***Theory:***

**BUZZER-**A buzzer or beeper is an audio signaling device which may be mechanical, electromechanical or piezoelectric. Typical uses of buzzers and beepers include alarm devices, timers and confirmation of user input such as a mouse click or keystroke.

**ARDUINO UNO-** 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 in which 2 digital pins are used where a pin (lets say 7) is connected to a buzzer which is further connected to ground. Now another pin   
(lets say 12) is connected to switch. One end of the switch is connected to 5V supply and intersection of pin 12 and switch is connected to resistor which is connected to ground from another end. Value of resistance is very high. The resistors are used to resist the flow of current. Coding is done in such a way that when switch is pressed buzzer starts making sound and again when switch is pressed buzzer do not make any sound.

***Learning and Observations : -***

* Making circuits using Arduino.
* Connecting buzzer and switch with arduino.
* Ground has least resistance.
* Working of Arduino UNO.
* 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 switch, buzzer and Arduino.
3. Using switch and buzzer.
4. Working and coding of Arduino.

***Result: –***

Working of buzzer and switch verified after uploading the program. Door bell is ready to ring.