



Name: Hunaid. S. Siamwala
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★ Experiment - 5

* Aim:- To study of various electronic tools: strip board, bread board, solder iron pliers, cutters, de-solder pump.

* Strip board:-

It is a widely used type of electronics prototyping board characterized by a 0.1 inch (2.54 mm) regular (rectangular) grid of holes, with wide parallel strips of Copper cladding running in one direction all the way across one side of board. It is commonly known by name Veroboard, which is a trademark, in UK. It is possible to break between holes to allow for components that have two pin rows only one position apart such as twin row headers for ICs.

* Bread board:-

A breadboard is usually a construction base for prototyping of electronics. The term "breadboard" is commonly used to refer to solderless breadboard. It originally was a flat wooden cutting board used to support a loaf of bread while it was being sliced, this original meaning is still in use, but has a new additional meaning as "a base for prototyping". This concept is not confined to electronic design & can be used by mechanical engineers.

Because the solderless breadboard for electronics does not require soldering, it is reusable. This makes it easy to use for creating temporary prototypes & experimenting with circuit design. Older breadboard types did not have this property. A variety of electronic systems may be prototyped by using breadboards, from small ~~an~~ analog & digital circuits to complete central processing units (CPUs).

* Solder iron Pliers:-

It is a hand tool used in soldering. It supplies heat to melt the solder so that it can flow into the joint between 2 workpieces.

It is composed of a heated metal tip & an insulated handle. Heating is often achieved electrically, by passing an electric current through a resistive heating element. Simple irons less commonly used than in the past were simply a large copper bit on a handle, heated in a flame.

Soldering irons are most often used for installation, repairs, & limited production work in electronics assembly. Large irons may be used for soldering joints in sheet metal objects. Less common uses include pyrography & plastic welding.

* Cutters:-

A Wire Cutter is an accessory that is shaped like a cutting wrench. Having the Wire Cutter equipped shows the location of wires on screen. As the name ~~so~~ suggests, the wire cutter allows you to 'cut' & gather wires for use elsewhere. It also allows you to remove placed actuators.

* De-solders pump:-

A desoldering pump, colloquially known as a solder sucker, is a manually-operated device which is used to remove solder from a printed circuit board. There are two types: the plunger style & bulb style.

The plunger type has a cylinder with a spring-loaded piston which is pushed down & locks into place. The bulb type creates suction by squeezing & releasing a rubber bulb.

The pump is applied to a heated solder connection, then operated to suck the solder away.

