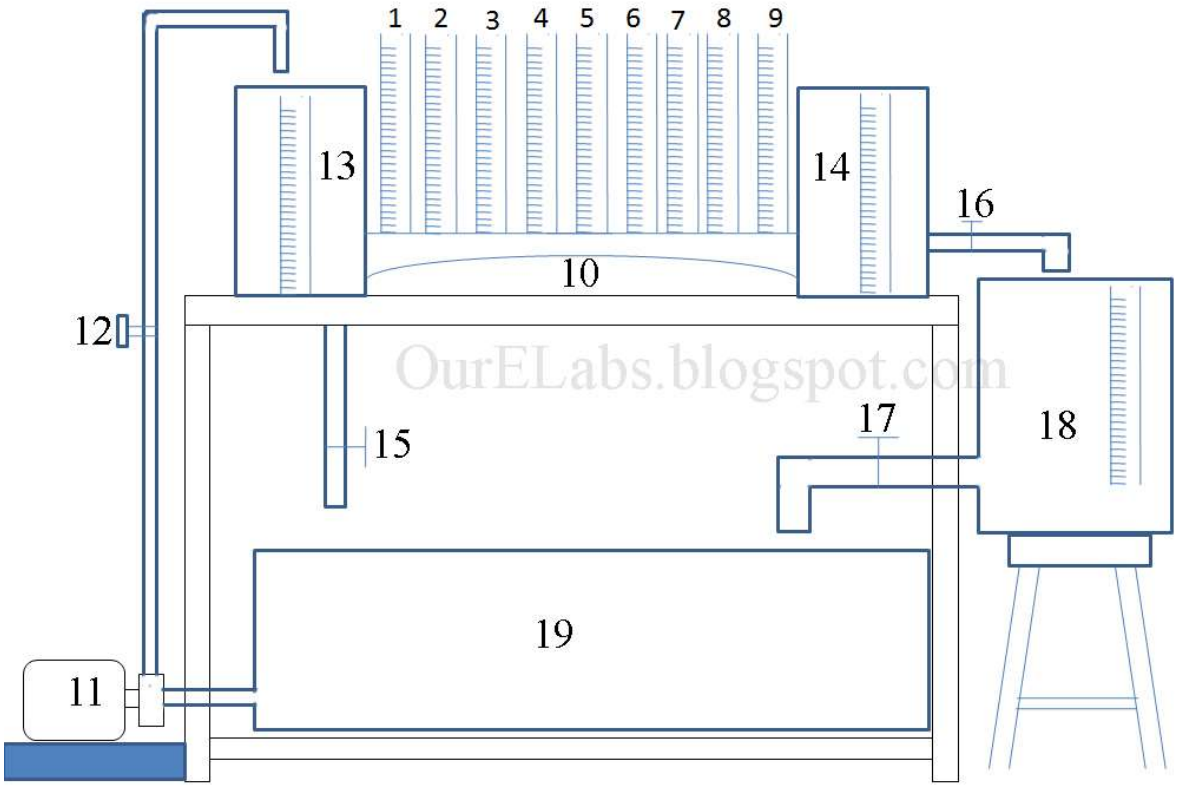

Instructions for developer:-

Parts name

1. 1-9: Piezo meters (A transparent tube with scale) are connected at various cross sections of the Duct (in mm^2).

	1	2	3	4	5	6	7	8	9
Cross section areas	40X36	40X32	40X27	40X25	40X29	40X31	40X34	40X38	40X40

10: Stainless Steel duct (for low friction).
11: Single Phase motor with pump(pump capacity is 0.5 HP, single phase 20 volts, 2800 RPM and pump of size 25 mm to discharge about 15 LPM at 30 Meter total head).
12: Flow control ball valve.
13: Supply tank with piezo meter.
14: Delivery Tank with piezo meter.
15: Supply tank drain control valve.
16: Out flow Control valve.
17: Drain valve from discharge tank.
18: Discharge measuring tank (0.3m X 0.3m Area).
19: Water storage tank.
Whenever the user points the arrow on specific part or number in the simulator then this information related to part / name should be displayed with the information
For eg:- if the user clicks on part no. 11 then this info must be displayed :
Single Phase motor with pump(pump capacity is 0.5 HP, single phase 20 volts, 2800 RPM and pump of size 25 mm to discharge about 15 LPM at 30 Meter total head).

For each set of readings:
Area of measuring tank A= Length X Breadth;
time for head 100mm rise of water in seconds; Rate of flow
Discharge = $\frac{A*h}{t}\frac{m^3}{sec}$

Where,
A = Area of the measuring tank in metres (0.3 m x 0.3 m)
h = Rise of water level (say 10 cm) in metres.
T = Time in seconds for rise of water level (say 10 cm).

Apparatus description

1) The pipe that is attached Is the venturimeter, i.e cross sectional area of area of the pipe varies uniformly. They get smaller in diameter at the certain point and again there is increase in area. Note that the cross sectional is not exactly at the middle.
2) The pipes that are attached to the venturimeter are known as piezometer. Before using the pipes must be overflowed to remove the air bubbles to give the accurate readings. While overflowing piezometers ensure that the output value is closed and **most important note tubes must be transparent.**
3) Click on the Part no.11 or ON button on screen and motor should turn on and water must start filling the tank.
4) Don't overflow the delivery tank.
5) And after tank start filling let the heads in the piezometer head must be stable and after that readings must be noted down.
6) The output value be open that is attached to the delivery valve.
7) Close the outlet valve of measuring tank and measure time in rise water level by 10cm.
8) Note down the reading in the simulator and plot the graph accordingly.
9) There are certain calculation that should be done by simulator like H_t+h,Q/A, $V^2/2g$

   Where H = height of measuring tank
   h = Rise of water level
   Q = discharge
   A = Area of measuring tank
   g = gravity.

Plot the graph according to measurements taken by user or taken automatically by the simulator.