

A (very) brief introduction to the "Fritzing.exe" program: (written by Dr. Mike)

Once you have installed the Fritzing software, run the program:

The Fritzing program opens in the "Welcome" tab. Click on the "Breadboard" tab instead. You will immediately see a picture of the exact-style breadboard we will be using in lab, as well as icons of electronic parts on the right-hand side of your screen.

- You can change the size of the breadboard/parts by either using your mouse scroll wheel or by using the commands in the "View" tab.
 - You can move the entire image around by first selecting the breadboard (left-click within the white area of the breadboard itself, not the holes) at which point you'll see a dashed line around the entire breadboard. Hold down the left mouse button to move the entire image around on your screen.
 - To place a part on the breadboard, first left-click on the icon to highlight it, and then, with your arrow upon the icon, hold down the left mouse button to drag the part over to the breadboard. The leads to the part will "snap-align" to any of the holes within the breadboard.
 - To wire parts together on the breadboard, move the arrow over the hole where you want the wire to start (you'll notice that a very tiny 'spool of wire' icon appears). Hold down the left mouse button and move the arrow to the hole where you want the wire to end.
- ▶ To remove a part or a wire, left-click the part or wire and hit the delete key.
 - ▶ "Undo" and "Redo" commands are found under the Edit tab. (notice that the "Undo" command is the familiar Control-Z)

To create the breadboard layout for Figure 2:

(a) Place 3 resistors on the breadboard in appropriate locations so that R2 and R3 are connected in parallel, which in turn are connected in series with R1. Challenge yourself to do this without using any wires ☺ (If you need to use wires, that's ok, too).

(b) Choose the battery icon (from the section called Power) and place it on the left side of the breadboard.

- + Wire the positive (red) battery connection to the top row of holes on the breadboard.
- Wire the negative (black) battery connection to the very bottom row of holes on the breadboard.

(c) Make appropriate wire connections to the 3 resistors.

(d) **SAVE YOUR FILE!**

- File/Save As and then give it a name. Note the unique file extension of *.fzz !!

This saves the file in some native format that the Fritzing program can open. To save the breadboard picture in a document-friendly format, choose "File/Export/as Image..." and then the format of your choice. The jpeg format allows for easy pasting into a Word document.