

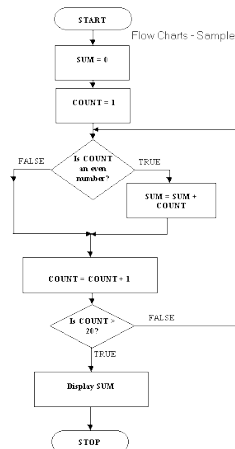
Rules for Apps Inventions With/Without Microcontrollers

If your invention *is* or *includes* an app that solves a problem, it is acceptable for the invention convention as long as the additional information listed below is included with the inventor's prototype, and the inventor can speak to each of the associated areas.

- If your invention is an app, you will need to provide #1 and #2 below on your display board and be able to explain to judges how your app's logic flows and the code printout of the code used to create the app. Be prepared to explain both in plain English. You may code in any language you want; if the entire listing doesn't fit on the display board, you may display a portion of it, but include all of it in your inventors log.

1. Logic Flow Chart

This is a drawing showing all the logical steps that the App performs as it operates the device. The Flow Chart could be made with a CAD package or simply drawn by hand.



2. Code Printout

This is a listing of the computer code used to create the App. You can use any language you want for the App.

```

/*
 * Example of when SEEK was successful
 */
Z_OFF_T request = abs_offset + G.extra_bytes;
Z_OFF_T inbuf_offset = request % INBUFSIZ;
Z_OFF_T bufstart = request - inbuf_offset;

if (request < 0) {
    Info(slide, 1, ((char *)slide, LoadFarStringSmall(SeekMsg),
    G.zipfn, LoadFarString(ReportMsg)));
    return(PK_BADERR);
} else if (bufstart != G.cur_zipfile_bufstart) {
    Trace((stderr,
    "fpos_zip: abs offset = %ld, G.extra_bytes = %ld\n",
    abs_offset, G.extra_bytes));
#ifdef USE_STRM_INPUT
    fseek(G.zipfd, bufstart, SEEK_SET);
    G.cur_zipfile_bufstart = ftell(G.zipfd);
#else /* USE_STRM_INPUT */
    G.cur_zipfile_bufstart = lseek(G.zipfd, bufstart, SEEK_
  
```

- If your invention is an app that interfaces with a microcontroller, you need to include #1, #2 and #3.

3. Electrical Schematic

This is a drawing of the electrical connections between the various parts showing how everything is connected together. This can be done with CAD software using the correct electronic symbols or simply draw rough images of the components by hand. You do NOT need to show the schematic of the Microcontroller itself, but just show the wires and components attached to the Microcontroller.

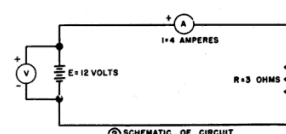
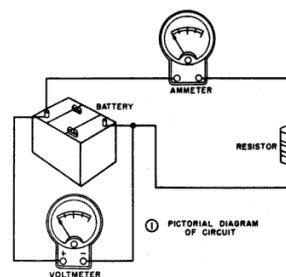


FIGURE 10. Diagram of a basic circuit.