**Instructions for Organizing your Smartwatch Repo**

You should have received templates for your Bill-of-Materials (BOM) file. Please watch the following videos to learn how to create a .gitignore file. Please watch both videos.

<https://youtu.be/gsc_bRIbER8>

<https://youtu.be/rwhaVkL_oYM>

Please be sure you watch both videos.

You can learn more .gitignore files here:

<https://www.pluralsight.com/guides/how-to-use-gitignore-file>

**ALWAYS CREATE THE EAGLE SCHEMATIC FIRST AND THEN GENERATE THE BOARD FILE USING THE Generate/switch to board BUTTON IN EAGLE** (see final page)**. DO NOT CREATE THE SCHEMATIC AND BOARD SEPARATELY (as in File->New->Schematic and File->New->Board).**

**Instructions**

1. Inside your local repository (on your computer), create two separate folders. One called Firmware and the other called Hardware. For those of you that think you’ll make some CAD designs, create another folder called Mechanical for any 3D CAD designs or other mechanical designs.
2. Inside the Hardware folder, create another folder called Basic
3. Inside the Basic folder, create three more separate folders called (they are all in the Basic folder, not within each other):

Top

Bottom

PPG-Module

1. Name you PCB files DeviceName-BASIC-TOP.sch (and subsequently DeviceName-BASIC-TOP.brd)
   1. Change TOP to BOTTOM and PPG-MODULE as appropriate and place them in the corresponding folders
2. Name your BOM DeviceName-BASIC-TOP-BOM
   1. Change TOP to BOTTOM and PPG-MODULE as appropriate and place them in the corresponding folders
3. Depending on the features you want, you may end up having a fourth or fifth PCB. Name these AUX1, AUX2 if it comes to that. Create corresponding folders called AUX1, AUX2, etc like you did in Step 2. Name the PCB files as necessary like you did in Step 3 and name the BOM like you did in Step 4 now replacing TOP, BOTTOM, etc. with AUX1, AUX2, etc.
4. Open up a blank Arduino sketch. Save it inside Firmware and name it DeviceName. Arduino will automatically append the .ino extension and will place the file in a folder with its name (DeviceName). As a result, the Firmware folder structure will look as follows: Firmware/DeviceName/DeviceName.ino

Now, inside your cloned folder, you should have the following organizational structure:

(DeviceName is the cloned folder)

DeviceName/

Firmware/DeviceName/DeviceName.ino

*Note: DO NOT create another folder in Firmware called “DeviceName.” When you save your Arduino code, it will automatically create the DeviceName folder for you*

Firmware/DeviceName/(various .h and .cpp files…**we’ll get to these in Week 3 or 4 of the workshop**)

Hardware/Basic/Top/(.sch, .brd, and BOM file)

Hardware/Basic/Bottom/(.sch, .brd, and BOM file)

Hardware/Basic/PPG-Module/(.sch, .brd, and BOM file)

.gitignore (you should have created this already given the instructions above)

DeviceName.docx (you can use .txt if you want or .doc)

README

**Push all these to the online repo. Do not use the add all command. Which is**

git add \*

or

git add -A

**Do not push files with a tilde (~) in front of them. Do not push EAGLE schematic and board autosave files (.b#? or .s#? files…where ? is some number). Do not push .development files. Do not push .DS\_Store files. Do not push random files that you think could be useful unless you know they are actually useful. A clean, well-organized, well-documented repo is a happy repo. Do not use the add all command.**

