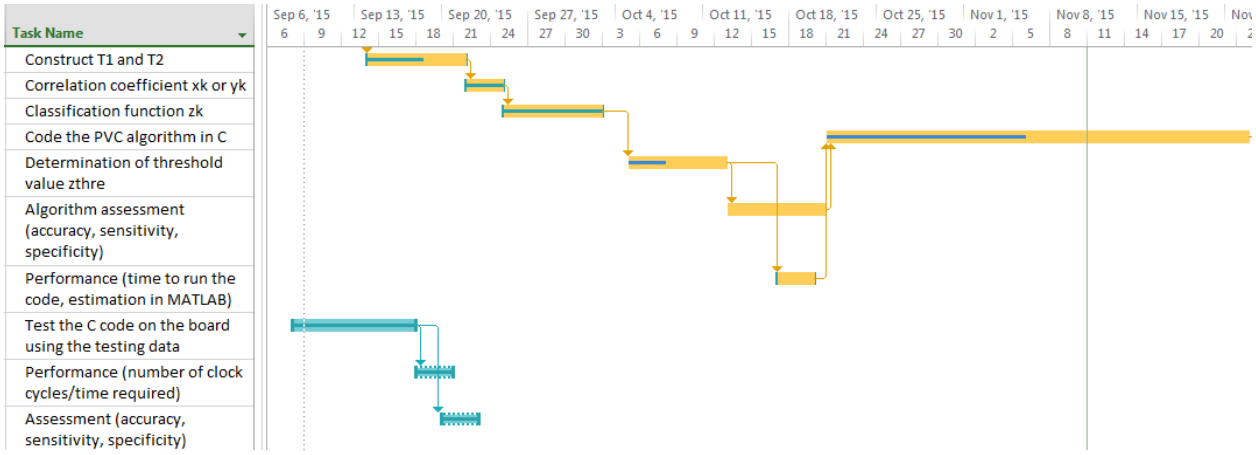
Gantt Chart (11/5-11/10)



Progress (11/5-11/10):

The team converted *T1_T2.m* to *T1_T2.c* and began the conversion of *Stretch_Comp.m*. After the team tested the template-matching algorithm with QRS complexes taken directly from the MIT-BIH database using the WFDB toolbox, the team found that the results were similar to those obtained in the original paper. However, some records still had high values of false positive PVCs compared to the original paper. For these reasons, the team is currently working on an alternative method to extract the QRS complexes and obtain T1. The method has been divided into four subfunctions, and three of these subfunctions have been completed.

After analyzing the .dat files, the team discovered that the Pan-Tompkins algorithm was inaccurate for record 102. Further MATLAB testing was conducted, and the source of the error was found to be the large voltage offset added to the heart signal before it was sent to the board. After the team reduced the size of the offset, the .dat files produced the expected results, with each record having at least 90% specificity and 90% positive predictivity.

Lastly, the team began investigating a potential Internet of Things service, Exosite. The company's website features a demo that will allow the CC3200 to transmit data to the website's cloud. The team is currently attempting to flash the binary file from the demo onto the CC3200 to test the service.

Goals (11/12-11/17):

The team will continue converting *Stretch_Comp.m* to *Stretch_Comp.c.* This file will be the final C function needed to begin the integration of all the C functions in a single C file. After each of the functions has been added to a single C file, the Pan-Tompkins code will then need to be integrated into the project. After this has been completed, the team will be on schedule with the C implementation phase of the project.

After the QRS complex extraction code has been completed and the accuracy of the PVC algorithm has been improved, the team will be on schedule with the MATLAB simulation phase. Also, the team will continue to develop the alternative QRS complex extraction code and test the viability of the Exosite platform.