# Beach Cities Robotics Clock-In System

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## Scope

The purpose of this document is to instruct FIRST teams to properly setup, customize and use Beach Cities Robotics’ clock in system.

## Background

Like many FIRST teams, Beach Cities Robotics (FTC/FRC/VRC Team #294) tracks the amount of ‘lab’ time our mentors and students spend working for the team. For the mentors, we track hours to provide documentation to employers who provide monetary donations when their employees volunteer within the community. For our students, we track hours to ensure they meet our eligibility requirements to travel with the team as well as to try out for the drive team. In addition to the logistics of the team, we’ve also used the information to illustrate the impact of our program.

For years, as students and mentors arrived or departed the lab he/she signed in and out via a paper log sitting by the door. Periodically, we would compile the data in a very archaic and inconsistent manner to produce analysis that was already out of date. With our team rapidly expanding, we needed a better system to track our hours…

We set some requirements and set forth on solving the problem. We needed something that:

* Was easy enough to use that our FLL members could use it
* Was easy to setup and maintain
* Had little to no reoccurring cost associated with it
* Could generate badges with pictures
* Could visual show who was in the lab
* Could perform analysis instantaneously

We accomplished all of these goals and have been using the system since January 2010. As we continued to use the system, word spread and numerous teams have approached me looking for something similar. While I was happy to share the system, it was designed around the image and policies of our team. With the addition of the ‘Team Setup’ sheet and a few modifications to code we had a system that any team could use.

This is the file you now possess.

## Computer Setup

1. Install font ‘3 of 9 Barcode’ by dragging the font file into C:\Windows\Fonts
2. Save ‘Clock In System.xlsm’ where ever makes the most sense for your file system
3. At the same level of the file, create a folder called ‘Badge Pictures’

## General Notes

When opening the workbook, ensure that macros are enabled. I wrote 100% of the macros and I assure you that they will not harm your computer. They are also open source so feel free to learn from them and modify them as you wish.

The sheet is designed to save itself every time someone logs out.

## File Setup

1. On the ‘Team Setup’ tab
	1. Change the parameters to match the colors and policies of your team
2. On the ‘Membership’ tab
	1. Clear out the existing membership information
	2. Add your team members
	3. Add any additional information you wish to store to the right

Notes:

* Do not delete any of the header rows
* Use any badges numbering system you wish – just ensure each badge number is unique
* Assign either ‘High School’ or ‘Middle School’ to mentors and students alike

## Badges

1. Take the photo in ‘Portrait’ mode with a solid background
2. Crop the photo to show shoulders and above using an ‘8x10’ aspect ratio
3. Save the file within the ‘Badge Pictures’ folder as the badge number for that person.

Notes:

* The file must be a .JPG
1. On the ‘Badge’ tab, input the badge number in the green box
2. Print the badge
3. Cut and laminate the badge using standard badge lamination pouches

Notes:

* Team Color 1 displays as the background color for students
* Team Color 2 displays as the background color for parents and mentors

## Clock In/Out

On the ‘Main’ tab, input the badge number in the green box. If you’re using a bar code reader, scan the badge bar code.

If the student or mentor/parent section is full then that person will show up in the overflow area. The workbook will do the same if it cannot find a picture loaded for that individual. If the overflow becomes full, a message will appear indicating that the individual is clock in/out.

## Enforcing No Clock-Out Policy

At the end of the day, if there are still people clocked in who have already left, click the ‘Clear Those Clocked In’ button and the sheet will sign out those people assigning them the time associated with your team’s policy.

## Data Archive

When someone clocks out the raw data is stored in the ‘Data Archive’ tab. Do not change the order of any of the columns. Use the filters to assist with any lookups necessary.

## Analysis

Upon clicking onto the ‘Analysis’ tab, the workbook will automatically update to show the latest information. The analysis is setup within a pivot table. If you are not familiar with pivot tables, I suggest you read up on them as they provide an extremely easy way to perform analysis – as long as you know how to use them.

Don’t sweat though, because if you don’t know how to use pivot tables, I’ve already setup the sheet to show the information that I’ve found to be the most useful. Simply select the level and year from the drop down list to limit the analysis to your selection and it’ll automatically update.

For people wish to perform additional analysis, I’ve already provided month, week, calendar year, and school year (Sep 1-Aug 31) field for convenience

## Feedback

I’m always looking for ways to improve this sheet and other so feel free to contact me at akeisic@gmail.com if you have any questions or comments.

Happy FIRST-ing!