

Team 191 Project Plan

Team Organization and Availability					
Members	Jobs	Comments	Wednesdays	Saturdays	Spring Break
Justin G	lead		OK	OK	OK
Chris E	documentation		OK	OK	OK
David G			OK	OK	OK
Zeshan T	coding	workshop day 2	OK	OK	OK
Darpan K	builder		OK	no afternoons	OK
Adam H	coding	workshop day 1	OK	OK	OK
Pavleen T	coding		OK	no mornings	OK
Clare L	coding	workshop day 2	OK	no afternoons	OK
Victor Y	coding		OK	no afternoons	OK
Peter G	builder	workshop day 2	?	?	?
Chris H	documentation		OK	?	?
Megan H	ideas		OK		sometimes
Brian B	builder		OK	no afternoons	OK
Ben W	coding		OK	sometimes	?
Alex S	documentation		OK	OK	?
Ryan S	documentation		OK	OK	?
Nadav K	builder		OK	OK	?

The building team and coding team work hand in hand to create our working robot. The Documentation Team records everything for future analysis. The Ideas Team is the link between the documentation and the robot. We work as individual sub-teams but together when we need to do so.

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Meeting Schedule					
Week	Day	Date	Time	Length	Task
	Wednesday	2/18	6-9pm	3	Plan
1	Saturday	2/21	9am-5pm	8	Workshop
1	Sunday	2/22	9am-5pm	8	Workshop
1	Monday	2/23	7-9pm	2	Plan
1	Wednesday	2/25	6-9pm	3	Design
2	Saturday	2/28	9am-noon	3	Experiment
2	Wednesday	3/4	6-9pm	3	Design
3	Saturday	3/7	9am-noon	3	Table
3	Wednesday	3/11	6-9pm	3	Buid
4	Saturday	3/14	9am-noon	3	Build
4	Monday	3/16	7-9pm	3	Documentation
4	Wednesday	3/18	6-9pm	3	Code
5	Saturday	3/21	9am-noon	3	Code
5	Wednesday	3/25	6-9pm	3	Redesign
6	Saturday	3/28	9am-noon	3	Test
6	Monday	3/30	7-9pm	3	Documentation
6	Wednesday	4/1	6-9pm	3	Test
7	Saturday	4/4	9am-noon	3	Test
7	Wednesday	4/8	6-9pm	3	Test
8	Saturday	4/11	9am-noon	3	Evaluate
8	Monday	4/13	6-9pm	3	Presentation
8	Wednesday	4/15	6-9pm	3	Test
8	Friday	4/17	6-9pm	3	Prepare
9	Saturday	4/18	7am-7pm	12	Tournament

We will clear the task color codes as we move throught the schedule. The week begins on Saturday.

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Color Codes:	Completed	In Progress	Behind Schedule	Hypothetical
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Week 2 - February 28				
Goals	People	Milestones	Status	Notes
Develop a game plan	Whole Team	Take notes and finish documenting the plan	Ongoing until ready for competition	Attack vs. Defense, which is more profitable?
Consider limitations on ideas and parts	Whole Team	Read rules and finalize design	Ongoing until ready for competition	Lighter bot has proved higher success rate in past botball teams
Assign roles to team members	Whole Team	Fill out Excel with names	Completed	Organization is be the key to success, specialization proves to be beneficial, but communications between teams is crucial
Assign roles to robots	Whole Team	Document and design optimum strategy	Completed	Create scores points and CBC prevents opponent points

Week 3 - March 7				
Goals	People	Milestones	Status	Notes
Tribble collection process	Whole Team	Create will collect tribbles while in cups	In progress	Leave cups over tribbles
Blocking off opponent peak	Whole Team	Handled by CBC bot	Hypothetical	Possible use of extending metal gate or treads
Seeding Strategy	Whole Team	Collect opponent points as well	Behind Schedule (Completed 3/11)	Collect Botguy
CBC base stability	CBC Team	Keep base stable but accessible	Completed	Fixed stability with fourth wheel
Botguy ideas	Create Team	Develop mechanism	In progress	

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Week 4 - March 14				
Goals	People	Milestones	Status	Notes
Frontal bulldozer	Create Team	Test whether all cups can fit	Behind Schedule (Completed 3/21)	Obtains red and green tribbles in cup. Intended to score points in seeding and block opponents getting Botguy in competition.
Turbine collector	Create Team	Test whether turbines can align to cavity	Completed	Collects first turbine and tests for other turbines
Botguy collector	Create Team	Test if the collector can align and capture Botguy	Completed	The collector will sweep Botguy off the cups and position Botguy between the bulldozer and the collector
CBC Platform	CBC Team	Test if the platform is strong enough to hold the CBC robot	Completed	Added a Lego base as well as other metal supports to ensure that the starting box platform can support the CBC robot
Attached CBC Camera	CBC Team	See if the camera could be properly positioned on the CBC robot	Completed	The camera is a color camera and it is used to locate the water
Started programming CBC	CBC Team	The CBC robot code works as planned	In progress	Programmed the camera on the CBC robot to find where the blue balls are and move toward them
Finish documentation	Documentation Team	Update schedule/ document failed ideas/ write-up prototypes	Completed	Documentation is key to success.
Started programming Create	Create Team	See if all the mechanisms attached to the Create could be programmed to work properly	In progress	Programmed the Create robot to lower the bulldozer and move forward to get the cups with balls and up the slope to deposit the turbines. Further tuning on the program is needed.

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Week 5 - March 21				
Goals	People	Milestones	Status	Notes
Begin documentation for next period	Documentation Team	Update schedule at each meeting	Completed	Keeping things up to date and organized will help progress.
Begin Testing!	Whole Team	Document and record results	Completed	Record results for all trails. We learn more from our failures than our triumphs
CBC Metal Blocker	CBC Team	Test to see if the bar is sturdy enough to block the Create and light enough to be carried by the CBC	Completed	This bar is to be carried by the CBC robot to block the challenging team's slop, blocking it off to their robots
Re-Balanced the CBC	CBC Team	Test to see if the CBC robot, with the improved balance, can move efficiently	Completed	The CBC processor was moved a few pegs back to better improve the balance on the robot
Added Expansion to the CBC Platform	CBC Team	Test to see if the CBC platform's extension is able to balance and hold up the metal bar attachment	Completed	The extension for the platform is made of Lego pieces, the extension is used to balance the metal bar blocker when the CBC pushes over the PVC pipe in the starting box
Re-formatted CBC Base	CBC Team	Test to see if the changes to the CBC base can prevent the robot from tipping over	Completed	The base was extended laterally to support the base on the bar to prevent the robot tipping over sideways
Perfected and Tuned program for the CBC Robot	CBC Team	Continuing refinement and creation of program to preform competition tasks	In progress	Perfecting competition code for the CBC Robot, tuning the CBC start code used to push the CBC over the PVC pipe
Perfected and Tuned program for the Create Robot	Create Team	Continuing refinement and creation of program to preform competition tasks	In progress	Perfecting competition code for the Create Robot, tuning the movement and use of parts of the Create robot
Added Stylistic components to the CBC Robot	CBC Team	Added a few components to the CBC robot that added some "fun" components	Completed	The components added have no real use but were just for the entertainment of our group, some components, for example, were wings, blaster cannons, and a police siren.

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Week 6 - March 28				
Goals	People	Milestones	Status	Notes
Rethink any strategy	Whole Team	Record ideas and finalize bot design	Completed	This will be the last time to change any major ideas. Testing should take place for at least three weeks.
Integration of bots	Coding team	Test and record	Completed	Our robots won't do much good if they run into each other
Added an anti-pop extension to the create's plow	Create Team	Test to see is the extension to the plow prevented the cups holding tribbles from popping open	Completed	The inside of the the plow has an added extension that prevents the cups from reaching the wheels of the roomba, which cause the cups to pop open
Added more traction to the CBC base	CBC Team	Test to see is the piece adds enough traction to keep the base sturdy	Completed	A wheel rubber was added to one of the supports of the base. The rubber's added traction is used to keep the base in place
Added and reformatted sleigh plows on the CBC's metal bar	CBC Team	Test to see if the sleigh plows work on the game board	Completed	Sleigh plows were added to the metal bar, however as we were testing the plows hindered the movement of the CBC robot. So we reformatted the plows to not hinder the movement of the CBC robot.
Perfected and Tuned program for the CBC Robot (For competition)	CBC Team	Test to see if the code works with the competition plan	In progress	We constantly tested with the CBC robot, perfecting the code to overcome the obstacles in our robot's way
Shifted metal bar	CBC Team	Test to see if the shift in the metal bar allows greter mobility and efficiency	Completed	We shifted the metal bar a little on the CBC robot to prevent the robot from turning erratically from the obstacles on the board
Created a swinging metal bar attachment	CBC Team	Test to see if the metal bar has enough energy to move obstacles out of the way	Completed	Attached a metal swing bar on top of the metal bar blocker to remove the obstacles from hindering the blocker's movement
Perfecting a tuning Create Robot's code	Create Team	Continuing refinement and creation of program to preform competition tasks	In progress	Perfecting competition code for the Create Robot, tuning the movement and use of parts of the Create robot

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Week 7 - April 4				
Goals	People	Milestones	Status	Notes
Finalization of integration testing	Coding Team	Document	Completed	The robots need to work together not against one another
Testing	Whole Team	Test and recode for better performance	In progress	Just keep testing until its perfect
Test some more	Whole Team	Record test results and recode	In progress	Tests are subject to Murphy's Law: The probability of a desirable possibility is inversely porportional to the desirability of the possibility.
Added String Suspension Systems	Create Team	Test to see if the string is strong enough to lift the metal plow	Completed	The string is attached and threaded to a servo motor that is supposed to make lifting the metal plow more efficient and faster
Moved CBC wheel	CBC Team	Test to see if the wheel's new location adds stability to the overall CBC base	Completed	The CBC wheel was moved from the front to the back of the CBC robot. This was used to prevent the CBC from doing a "wheelie" and falling off balance.
Removed Botguy arm	Create Team	Test to see if the romoval of the Botguy arm has any influence on the overall integrity of the Creat Robot	Completed	Through many tests we removed the Botgy collector arm because it didn't work efficiantly and got in the way of the other mechanisms on the robot
Added a ramp for the CBC platform	CBC Team	Test to see if the ramp attachment for the CBC robot platform aids the CBC robot	Completed	A ramp was added to the CBC platform to aid in the descent of the CBC robot. The ramp folds into the starting box and is pushed down by the CBC robot
Add light sensors to both robots	Whole Team	Test to see if the robot codes can be started by using the light sensors	Completed	Light sensors were added to the robots to make it so they could be started by a light.

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Week 8 - April 11				
Goals	People	Milestones	Status	Notes
Be as prepared as possible	Whole Team	Running well documented tests	In progress	Through testing we learned more about the issues our robots are having. From there we were able to correct them, and test again.
Period 3 documentation finished	Documentation Team	All documents edited and submitted on time	In progress	We have one more assignment to complete. It will get done before the final deadline.
Documentation presentation ready	Documentation Team	Practice the oral presentation at least once	In progress	The presentation board is in progress, and the speech is also in the works.
Last minute testing	Whole Team	Agree our robot is the best it will be	In progress	Testing went well today, but testing is never done. Our scores are not where we would untimely like them to be, but they are getting there.

Week 9 - April 18				
Goals	People	Milestones	Status	Notes
Presentation Final	Documentation Team	Bring all materials to present	Future	Look nice and leave an impression on the judges
Win!!	Whole Team		Closing fast!	Ready or not here we come