

Region: European Conference on Educational Robotics (Austria)

Team name: Bottronics

Team number: 19.0397

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## Period One – Project Plan

### Goals and Tasks for Botball 2019

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#### 1) GAME GOALS AND TASKS

- a) Review the game rules and game documents and watch the review movie, 1/21/19.
  - I. Print game rules, 1/21/19
  - II. Watch the game rules movie, 1/21/19
  - III. Discuss the most important game rules and write them on a white board, 1/21/19
- b) Thinking about game relevant tasks, 1/22/19
  - I. Brainstorming about game strategies, 1/22/19
  - II. Select the best strategy to score as many points as possible, 1/22/19
- c) Build Practise Board, 2/2/19
  - I. Assemble list of supplies, 1/24/19
  - II. Order the needed supplies at a local company, 1/24/19
  - III. Build the Practise Board, 2/2/19

#### 2) ROBOT BUILDING GOALS AND TASKS

- a) Get the basic knowledge about the Create and LEGO robots, 1/24/19

I. Make a sketch of the concept for the LEGO robot under consideration of the chosen strategy, 1/24/19

II. Make a sketch of the concept for the Create robot under consideration of the chosen strategy, 1/24/19

b) Construction of the Create robot, 2/15/19

I. Construction of a claw arm mechanism to move the disks, 2/14/19

II. Find solutions to stabilize the claw arm, 2/11/19

c) Construction of the LEGO robot, 2/15/19

I. Construction of a mechanism to collect the balls, 2/14/19

II. Construction of a mechanism to sort the balls with different colors, 2/11/19

### 3) PROGRAMMING GOALS AND TASKS

a) Connect the microcontroller with the Create robot (demobot) and run test programs, 2/9/19

I. Connect the demobot with the microcontroller (Wallaby), 2/9/19

II. Getting used to the basic movements of the bot, 2/11/19

III. Check the functionality of each sensor and motor, 2/9/19

b) Programming the LEGO robot, 3/6/19

I. Write the program for the sorting logarithm, 2/27/19

II. Write the program for the general movement and precise turning, 3/6/19

c) Programming the Create robot, 3/6/19

I. Write the program for the claw arm, 2/27/19

II. Write the program for the gripper and piling mechanism, 3/6/19

#### 4) DOCUMENTATION GOALS AND TASKS

- a) Period 1 Documentation complete, 2/15/19
  - I. Assign Tasks to the team members, 1/24/19
  - II. Establish the meeting days, 1/24/19
  - III. Collect information from building and programming, 2/2/19
- b) Period 2 Documentation complete, 3/11/19
  - I. Collect information from the building team, 3/9/19
  - II. Collect information from the programming team, 3/9/19
- c) Period 3 Documentation complete, 4/1/19
  - I. Gather the learned lessons from the team, 3/29/19
  - II. Make an Excel spreadsheet with the learned lessons, 3/29/19

#### 5) SCHEDULE CONFLICTS

- a) Workshop 3D- Printer (constrictive entry to the game table), 2/4/19 – 2/8/19
- b) Majority of the team was absent due to diseases, 2/18/19 – 2/24/19
- c) Soccer Tournament, 2/7/19, 2/21/19, 2/28/19

### Team Organization

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Schedule of Meeting Times:

#### Legend

Meeting Days

Botball

## January

Mon	Tues	Wed	Thur	Fri	Sat	Sun
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

## February

Mon	Tues	Wed	Thur	Fri	Sat	Sun
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28			

## March

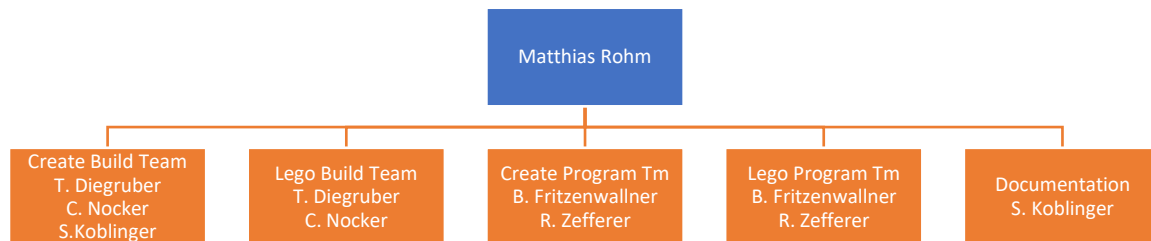
Mon	Tues	Wed	Thur	Fri	Sat	Sun
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

## April

Mon	Tues	Wed	Thur	Fri	Sat	Sun
1	2	3	4	5	6	7
8	9	10	11	12	13	14

## Division of Labor:

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## Conflict Resolution

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The team has agreed that if disagreements occur we will handle them in the following way:

1. If a problem occurs the team members will try to solve the problem by themselves. Each opinion is presented with pros and cons.
2. If no solution is found the team members will present the problem to S. Koblinger, the student team leader
3. If there's still no resolution the problem will be presented to M. Rohm, the adult team leader. He is either choosing the final solution or will present an alternative one. The alternative solution will be accounted for in a separate vote.