

# Los Altos Community Team 190510

## **Period One - Project Plan**

### Goal and Tasks for Botball 2019

#### 1. Game Goals & Tasks

- a. Building the Game Board (complete by: **Feb. 10**)
  - i. Table building went pretty well
  - ii. Table a little skewed (try to fix by: **Feb. 10**)
  - iii. Received most supplies (not all teams were fortunate enough to get it)
  - iv. Check table for correctness (by: **Feb. 10**)
- b. Robot Strategies (finalize by: **Mar. 6**)
  - i. 16 blue poms with scooping arm+basket or treadmill to slide poms up
  - ii. Put blue poms into utility one
  - iii. Wallaby will get the one pom in the starting box and then get the 15 on the blue line, put them into a container and dump it into the blue bin
  - iv. Create will go for the burning skyscraper(burning building) and put them in
  - v. Also go for botguy for in the disaster relief Zone
  - vi. Use color sensing to detect zones, poms, people(try to complete by **Feb.24**)
  - vii. Gyro will be used to drive straight(try to complete by **Feb. 24**)
- c. Calculating the Points (finalize calculations by: **Feb 24**)
  - i. 100 points for Botguy moved to the disaster relief zone
  - ii. 320 points for the blue poms in the utility zone (decide by: **Feb 24**)
  - iii. 200 points for the large water container on top of the burning skyscraper
  - iv. Some parts may be changed later(decide by: **Feb 24**)
  - v. Max score:620; Min. score: 0

#### 2. Robot Building Goals & Tasks

- a. Blueprint the iCreate and Wallaby (complete by:**March 1**)
  - i. Complete a blueprint for the iCreate (complete by: **March 1**)
  - ii. Complete a blueprint for the Wallaby (complete by: **March 1**)
- b. Construction of Wallaby (complete whole thing by: **Mar. 15**)
  - i. Construct arm(s) to complete tasks(due: **Mar. 15**)
  - ii. Build main body and construct wheels (due: **Mar. 15**)
- c. Construction of iCreate (complete the whole bot by: **Mar. 15**)
  - i. Build a very long arm for the high buildings(due: **Mar. 15**)

- ii. Use color sensors for the poms and people, and to differentiate colored zones (due: **Mar. 15**)

### 3. Building Goals & Tasks

- a. Blueprint the iCreate and Wallaby (complete by: **Mar. 11**)
  - i. Complete a blueprint for the iCreate (complete by: **Mar. 8**)
  - ii. Complete a blueprint for the Wallaby (complete by: **Mar. 8**)
- b. Construction of Wallaby (complete whole thing by: **Mar. 21**)
  - i. Construct arm to collect poms(due: **Mar. 15**)
  - ii. Decide if a container is needed (decide by: **Mar. 8**)
  - iii. Build main body and construct wheels (due: **Mar. 15**)
- c. Construction of iCreate (complete the whole bot by: **Mar. 21**)
  - i. Construct arm to reach up high above buildings (due by: **Mar. 15**)
  - ii. Use color sensors for the burning building (due: **Mar. 15**)

### 4. Programming Goals & Tasks

- a. Planning the Groups (finish by: **Mar 16**)
  - i. Split into separate groups (decide groups by: **Mar 16**)
  - ii. Plan out what code each group is writing (by: **Mar 8**)
    - 1. Make sure to check that each group is ready before coding
- b. Wallaby Coding (finalize code by: **Mar 22**)
  - i. Have pseudo code ready so everyone knows what they are doing (complete by: **Mar 15**)
  - ii. Have the rough draft code ready (by: **Mar 22**)
- c. iCreate coding (finalize code by: **Mar 22**)
  - i. Have pseudo code ready (by: **Mar 15**)
  - ii. Have the rough draft code ready (by: **Mar 22**)
    - 1. PS, do occasional group checkups to see how everyone is doing (for both robots)

### 5. Documenting Goals & Tasks

- a. Decide if we should take turns documenting (resolve by: **Feb. 8**)
- b. Period 1 Documentation (turn in by: **Feb. 13**)
  - i. Have rough draft done (due: **Feb. 10**)
  - ii. Have it proofread and finalized (due: **Feb. 10**)
- c. Period 2 Documentation (turn in by: **Mar. 10**)
  - i. Have rough draft done (due: **Mar. 10**)
  - ii. Have it proofread and finalized (due: **Mar10**)
- d. Period 3 Documentation (turn in by: **April 10**)
  - i. Have rough draft done (due: **April 7**)

ii. Have it proofread and finalized (due: April 7)

#### Schedule Conflicts

1. Jason cannot come on some Sundays(every other week)
2. Kyle cannot come on 2/17, 2/22 and 3/15

#### Conflicts to consider

Vacations during break(spring, ski week)

Sports tournaments/events(basketball, tennis,etc...)

Holidays

#### Team Organization

##### *Schedule of Meeting Times*

Regional Workshop- 2/3, 2/4

Regional Tournament- 4/13

Meeting Dates (7:00 - 9:30 pm on Fridays, 7:00 - 9:30 pm on Sundays)

Schedule for February: 2/8, 2/10, 2/15, 2/17, 2/22, 2/24

Schedule for March: 3/1, 3/3, 3/8, 3/10, 3/15, 3/17, 3/22, 3/24, 3/29, 3/31

Schedule for April: 4/5, 4/7, 4/12

\*Extra meetings will be scheduled based on team member availability

##### *Division of Labor*

Adult Team Coach: Wenshan Liu

Captain: Henry

Mechanical Team for Create: Matthew, Nicholas

Mechanical Team for Wallaby: Kyle, Alex

Programming Team for Create: Kevin, Brandon

Programming Team for Wallaby: Jason, Andrew

Documentation Team: Jason, Andrew

##### *Conflict Resolution*

Our team was run under the directions of our captain, Henry Wang

- Jason Zhang and Alex will help with programming related conflicts
- Henry Wang will help with mechanical conflicts
- We handled conflicts as a team through an organized process:
  - Sat down as a team to debate and brainstorm solutions to the problem if the problem concerned many members of the team.

- If the problem only affected a small part of the team, those people would decide on a solution, ie. Create needs to have an arm fixed with two people having different ideas. Then the build team will decide on a solution.