Period One- Project Plan

Hanalani 19-0052

Goals and Tasks for Botball 2019

Game Goals and Tasks:

1. Review game rules document (Target Deadline- January 16)
    a. Team members watch game video (Target Deadline- January 16)
    b. Team members read game rules document (Target Deadline- January 16)
2. Build practice board (Target Deadline- January 12)
    a. Adult leader buys parts at Home Depot (Target Deadline- January 12)
    b. Adult leader modifies previous year's board to fit current board specifications (Target Deadline- January 12)
3. Plan strategies (Target Deadline- February 22)
    a. Identify major and minor tasks for this year's game (Target Deadline- January 22)
    b. Plan individual seeding strategy (Target Deadline- January 28)
    c. Plan group seeding strategy (Target Deadline- January 29)
    d. Plan team seeding strategy (Target Deadline- January 30)
    e. Plan individual DE strategy (Target Deadline- February 19)
    f. Plan group DE strategy (Target Deadline- February 20)
    g. Plan team DE strategy (Target Deadline- February 21)

Robot Building Goals and Tasks:

1. Prototype Create and Legobot (Target Deadline- February 28)
    a. Build a Legobot prototype (Target Deadline- February 28)
    b. Build a Create prototype (Target Deadline- February 28)
2. Complete construction of Legobot (Target Deadline- March 15)
    a. Construct chassis (Target Deadline- March 15)
    b. Construct arms (Target Deadline- March 15)
    c. Construct claws (Target Deadline- March 15)
    d. Construct Sweeper (Target Deadline- March 15)
    e. Attach sensors (Target Deadline- March 15)
3. Complete construction of Create Robot (Target Deadline- March 15)
    a. Construct platform (Target Deadline- March 15)
    b. Construct arm (Target Deadline- March 15)
    c. Construct claw (Target Deadline- March 15)
    d. Attach sensors (Target Deadline- March 15)

Programming Goals and Tasks:

1. Program and test library of functions for Legobot and Create (Target Deadline-April 5)
    a. Program and test motor functions for Legobot (Target Deadline- April 5)
    b. Program and test effector functions for Legobot (Target Deadline- April 5)
    c. Program and test sensor functions for Legobot (Target Deadline- April 5)

   d. Program and test motor functions for Create (Target Deadline- April 5)
   e. Program and test effector functions for Create (Target Deadline- April 5)
   f. Program and test sensor functions for Create (Target Deadline- April 5)
2. Complete Program for Legobot (Target Deadline- April 26)
   a. Program and test for Legobot seeding (Target Deadline- April 26)
   b. Program and test for Legobot double elimination (Target Deadline- April 26)
3. Complete Program for Create (Target Deadline- April 26)
   a. Program and test for Create seeding (Target Deadline- April 26)
   b. Program and test for Create double elimination (Target Deadline- April 26)

Documentation Goals and Tasks:

1. First Period Documentation Complete (Target Deadline- February 12)
   a. Finish project plan document (Target Deadline- February 12)
   b. Print out rubric and form a documentation binder (Target Deadline- January 31)
2. Second Period Documentation Complete (Target Deadline- March 12)
   a. Finish mechanical systems designs document (Target Deadline- March 12)
   b. Finish code review document (Target Deadline- March 12)
3. Third Period Documentation Complete (Target Deadline- April 9)
   a. Finish lessons learned document (Target Deadline- April 9)
   b. Complete online survey (Target Deadline- April 9)
4. Onsite Presentation Preparation Complete (Target Deadline- May 1)
   a. Finish presentation binder (Target Deadline- May 1)
   b. Finish physical model of Legobot (Target Deadline- May 1)
   c. Have mock presentations (Target Deadline- May 1)

Schedule Conflicts:

1. Martin Luther King Jr. Day- January 21—no school
2. President's Day- February 18—no school
3. STEAM week- March 18-22—no classes
4. Spring break- March 25-29—no school
5. Senior trip- March 29-April 6—2 team member gone

<u>Team Organization</u>

Schedule of Meeting Times:

Regional workshop- February 2-3
Regional tournament- May 2

Note: We organized the team and started working as soon as the game rules were released. We started several weeks before our regional workshop.

January 14 and subsequent Mondays (except January 2, February 18, March 18 and 25): Pd. 1
    (7:40-8:25 AM), Pd. 7 (2:05-2:45 PM)
January 15 and subsequent Tuesdays (except March 19 and 26): Pd. 1 (8:30-9:10 AM), Pd. 7
    (1:20-2:00 PM)
January 16 and subsequent Wednesdays (except March 20 and 27): Pd. 1 (7:40-8:25 AM), Pd. 7
    (12:35-1:15 PM)
9January 17 and subsequent Thursdays (except March 21 and 28): Pd. 1 (7:55-9:10 AM), Pd. 7
    (1:30-2:45 PM)

Division of Labor:

<u>Team Structure</u>
Adult Team Leader: Mr. Chenfu Chiang
Student Team Leader: Calvin Chu
Group 1: Calvin Chu (leader), Aysia Tom, Freddie Rice, Troy Wakabayashi
Group 2: Kainoa Yee (leader), Chloe Huang, Andrew Brunken

<u>Responsibilities</u>
Builders (Legobot): Calvin Chu (Chief), Freddie Rice, Kainoa Yee
Builders (Create): Aysia Tom (Chief), Troy Wakabayashi, Chloe Huang, Andrew Brunken
Programmers (Legobot): Calvin Chu (Chief), Freddie Rice, Kainoa Yee
Programmers (Create): Aysia Tom (Chief), Troy Wakabayashi, Chloe Huang, Andrew Brunken
Documentation: Chloe Huang (Chief), Andrew Brunken, Troy Wakabayashi
Note: There is some overlap due to the abilities of team members. Chiefs and positions were decided based on member experience and skills.

Conflict Resolution:

1. Team members in disagreement will first attempt to work out the disagreement together.
2. If a resolution cannot be reached, the team members will bring the problem to the group leader.
3. If a resolution still cannot be reached, the team members will bring the problem to the team leader.
4. If a resolution still cannot be reached, the team members will roll a dice and go with the higher roller.