

Period One-Project Plan

Game and Tasks for Botball 2019

1. Game Goals and Tasks

- a. Review the game documents and game rules movie. (done by Jan. 24th, 2019)
 - i. Review the game rules and videos (done by Jan. 25th, 2019)
 - ii. Build the game table and organize the lego and metal parts by following the part lists. (done by Feb. 5th, 2019)
- b. Brainstorm Strategies based on scores and difficulty on coding. (Started from Jan. 29th, 2019; Scheduled done by Feb. 8th, 2019)
 - i. Assigning the task for brainstorming the ideas for scoring based on the game scoring sheet to the team members. (Done by Jan. 31st, 2019)
 - ii. Identify the critical points on the scoring strategies and the game table setup. (Done by Jan 30th,2019)
 - iii. Discuss the routes and task for both robots for scoring. (Started from Jan. 31st; Scheduled done by Feb. 8th, 2019)
 - iv. Team Captain Finalized the scoring strategies and alternative strategies for each robot.(Started from Feb. 4th, 2019; Scheduled done by Feb. 8th, 2019)
- c. Finish building the rest of the parts on the Game Table and Assign the missions to the team members of constructing robots and coding. (Construction done by Feb. 5th, 2019; Assignment done by Feb. 1st, 2019)
 - i. Finalized the Game table setup(Feb. 5th, 2019)
 - ii. Team captains assign members into coding group and construction group of each robot.(Assignment done by Feb. 1st, 2019)
 - iii. Check each members' ability on coding and constructing with LEGO and metal parts. (Sorting done by Jan. 25th, 2019)

2. Robot Building Goals and Tasks

- a. Discussing the critical part on the structure for each robot (Jan 29th, 2019)
 - i. Identify the difficulty within each robot's construction. (Jan 28th, 2019)
 - ii. Create the example claw and scoops structure attached with servos. (Jan. 29th, 2019)
- b. Complete the plan on building the Create and LEGO Robots. (Planning done by Feb 1st, 2019)

- i. Complete a sketched blueprint of the Create robot based on the chosen strategies (Jan 31st, 2019)
 - ii. Complete a sketched blueprint of the LEGO robot based on the chosen strategies (Jan 31st, 2019)
- c. Complete the construction on the Create Robot(Started from Feb 1st, 2019, Scheduled finish by Mar. 1st, 2019)
 - i. Complete the arm structure connected to the base. (Arm structure done by Feb 4th, 2019)
 - ii. Attached the enhanced claw structure on the arm. (Claw construction done by Feb 5th, 2019)
 - iii. Organize the wires and else part of the structure. (Started on Feb 6th, 2019; Scheduled finish by Mar. 1st, 2019)
- d. Complete the construction on the LEGO Robot (Started from Feb 1st, 2019, Scheduled finish by Mar. 1st, 2019)
 - i. Complete the base structure of the robot (Base structure done by Feb 4th, 2019)
 - ii. Finished the gear structure within the claw (Gear structure done by Feb 6th, 2019)
 - iii. Test out with the availability and strength of grabbing cubes and poms.(First testing done on Feb 6th, 2019)

3. Programing Goals and Tasks

- a. Complete and run the programs of the Create Robot(Started on Jan 31st, 2019; Scheduled finish by Mar 1st, 2019)
 - i. Complete the primary scoring program of the Create Robot(Primary Scoring scheduled done by Feb 13th, 2019)
 - ii. Complete the alternative program of the Create robot (Scheduled finish by Mar 1st, 2019)
- b. Complete and Run the programs of the LEGO Robot(Started on Jan 31st, 2019; Scheduled finish by Mar 1st, 2019)
 - i. Complete the primary scoring program of the LEGO Robot(Primary Scoring scheduled done by Feb 13th, 2019)
 - ii. Complete the alternative program of the LEGO Robot(Scheduled finish by Mar 1st, 2019)
- c. Test out both robot with program on the game table, coordinate the route and identify the problems.(Started on Feb 5th, 2019; Scheduled first general test done by Feb 13th, 2019)

- i. Identify the problems of the time management, route, speed and record the score of the test. (Timing done by Feb 4th, 2019; route scheduled done by Feb 8th, 2019)
- ii. Making adjustment on the programming of each robot after the test. (Scheduled comprehensive adjustment by Mar 1st, 2019 when the first general run is finished)

4. Documentation Goals and Tasks

- a. First Period Documentation Complete (First documentation done by Feb 6th, 2019)
 - i. Review the Document with Team (Review done by Feb 4th, 2019)
 - ii. Submit the document (Scheduled submission by Feb 6th, 2019)
- b. Second Period Documentation Complete (Second documentation scheduled done by Mar 13th, 2019)
 - i. Check the rubric of the documentation (Checking scheduled done by Mar 8th, 2019)
 - ii. Review with the team and making adjustment (Review scheduled done by Mar 11th, 2019)
- c. Third Period Documentation Complete (Third documentation scheduled done by Apr 24th, 2019)
 - i. Check the rubric of the documentation (Checking scheduled done by Apr 19th, 2019)
 - ii. Review with the team and making adjustment (Review scheduled done by Apr 22nd, 2019)
- d. Onsite Presentation Preparation (Onsite presentation scheduled done by Apr 27th, 2019)
 - i. Decide the topic distribution to the members attending the onsite presentation (Decision scheduled done by Apr 22nd, 2019)
 - ii. Making flashcards and prepare for the assigned topics. (Preparation scheduled done by Apr 26th, 2019)

5. Schedule Conflicts

- a. Midterm Exam Week (Midterm Exam week was scheduled by Jan 22nd- Jan 25th, 2019)
- b. Winter (February) Vacation Week (Winter vacation is scheduled from Feb 18th- Feb 22nd, 2019)
- c. Math Team Meets and Science Team Meets (Math team meets on every Thursday in the first week of the month from October to March; Science team meets on every Tuesday in the first week of the month from September to Apr)
- d. Spring (April) Vacation week (Spring vacation is scheduled from Apr 22nd- Apr 26th, 2019)

6. Team Organization

Team Setup:

Club President: Ziang(Eddie) Shi--Senior

Vice President: Weihang(Leo) Lin--Junior, Haodong(Jason) Yan--Senior

Members: Junior--Letian(Harry) Mo; Sophomore--ChenYao(Frank) Yuan, ShiHao(Steve) Wang, ZiXin(Tony) Liu, WenBin(Robin) Hu, ZhiYuan(Chris) Deng

Division of Labor

Create Robot:	LEGO Robot:
1. Construction group of the Create Robot	1. Construction Group of the LEGO Robot:
Project Manager : Ziang Shi members : Weihang Lin	Project Manager: Weihang Lin Members: ChenYao Yuan ShiHao Wang Zixin Liu WenBin Hu
2. Programming group of the Create Robot	2. Programming group of the LEGO Robot
Project Manager: HaoDong Yan Members : LeTian Mo	Project Manager: LeTian Mo Members: ZhiYuan Deng

Documentation: Ziang Shi, Weihang Lin

7. Schedule of Meeting Times:

Regional workshop- 8:00 am, Jan 26th, 2019 New England Botball Workshop

Tournament- All day, Apr 27th, 2019 New England Botball Tournament

Meetings will run from 2:15 pm to 4:00pm every weekday

Also, within the last two weeks before the tournament, the meetings will be most likely working from 2:15pm to 6:00pm.

Resolution to the conflict of the unexpected incidents or any other school events.

1. Additional meeting will be added in the following week if there is a conflict day in the week.
2. There should be no delay for the documentation.
3. If there is conflict of the meeting, programming group members are obliged to bring the robot home and finish the tasks of the day.