

Team: Dash-Bots

Number: 809

Region: New York/Jersey

### Period One - Project Plan

## Games Goals and Tasks for Botball 2023

- Prior to first meeting
  - Reviewed game rules
    - Wanted to brainstorm how we can form an effective solution while abiding by the rules
  - Familiarized ourselves with the game board
    - Pondered the possibilities for designing a smooth and successful program

## Programming Goals and Tasks

- 2/12/23 (February 12th)
  - Learned basic C operators
    - Our team needed to know how to use the programming language etc.
  - Learnt about team
    - Focused and analyzed strengths, weaknesses, etc.
- 2/26/23 (February 26th)
  - Loops with C
    - When is this function used?
    - How do we accurately write a loop?
    - When do we know which loop to use?
      - For loop, while loop, do while loop
  - Reviewing the Game Board
    - Obtained familiarity with parts we must work with
    - Identified number of parts
- 3/5/23 (March 5th)
  - How to use the Robot & Functions
    - Familiarize ourselves with the robot parts.
  - Divided the team into the Wombat group and Roomba group to split up the work
    - Assigned each of our roles in our groups (Stenographer, coder, builder)
    - Worked on making a game plan

- Coded a little to move our team's robot
- 3/19/23 (March 19th)
  - Light sensors
    - 4000 = no light, <1000 = light
  - Line Following 3400, = White, 4000 = Black
- 3/26/23 (March 26th)
  - Learn About Gears
    - How Torque works
    - The different types of gears
  - By 4/2/23 we want to complete our project plan and
    - Straight Tooth Gear
    - Double Bevel Gears
  - Building Robots
  - Strategies
- 4/2/23 (April 2nd)
  - Finishing our project plan
  - Focused on building arms
    - Picking which arm to use in our robots
    - How can we utilize torque to pick up objects?
    - Debated which robot should do which task
    - Our team decided that the romba should complete wireshark and the and the wombat should get botgal
  - Write and upload program to GitHub
- 4/9/23 (April 9th),  
4/9/23-5/14/23
  - Developing a plan
  - Making and planning our robots code (building add-ons to our robot)

## Robot Building Goals and Tasks For Botball 2023

- By 3/26, our entire team should be familiar and confident with using gears to help build arms .
  - We can accomplish this by using YouTube videos to familiarize ourselves with all the types of gears and practice by using them to create simple arms

- We can also ask for assistance from our coaches and mentors so we can use their knowledge to strengthen our comprehension of gears and their advantages
- By 4/2, our team should be using arms to plan on what tasks to do.
  - We can accomplish this by building the arms and get familiar with what they can do
  - We can also use parts to modify the arm and change what things they can do such as adding length or increasing torque.
- By 4/9/23, our team should code our arms to achieve the team's important tasks
  - We can accomplish this by team using our coach's help and youtube videos that explains and goes in depth into the lego arm.
  - Our team should also make up with the code for while we are building and developing our robot arms
- By 4/16/23, Our team should make a youtube video about the mechanical design and team's roles such as coder, stenographer, and builder
  - We can accomplish this by our team pitching in together at class
  - Our team should also not fool around while making the video so the task could be completed in time and we won't have that much work on our hands

## Documentation Goals and Tasks

- 4/2/23, our stenographer needed to document every part and plan for our robot, and the coder needed to complete the P1 project plan
  - This relates to our goals from our robot building goals and tasks since we talked about completing the project plan
- 4/7/23, our team needs to make a video about mechanical design
  - This also relates to our building goals and tasks since we talked about making a youtube video about this.

## Schedule Conflicts

- We had 2/19/23 off from our class since it was George Washington's birthday
- We also have 4/6/23 off since the New Jersey's school districts start spring break at that time and it lasts for a week or more

