



Senior Secondary Division Competition Details

Requirement

Participating teams must complete both Round A and Round B competitions

Round A: Throw And Push Cubes

Mission

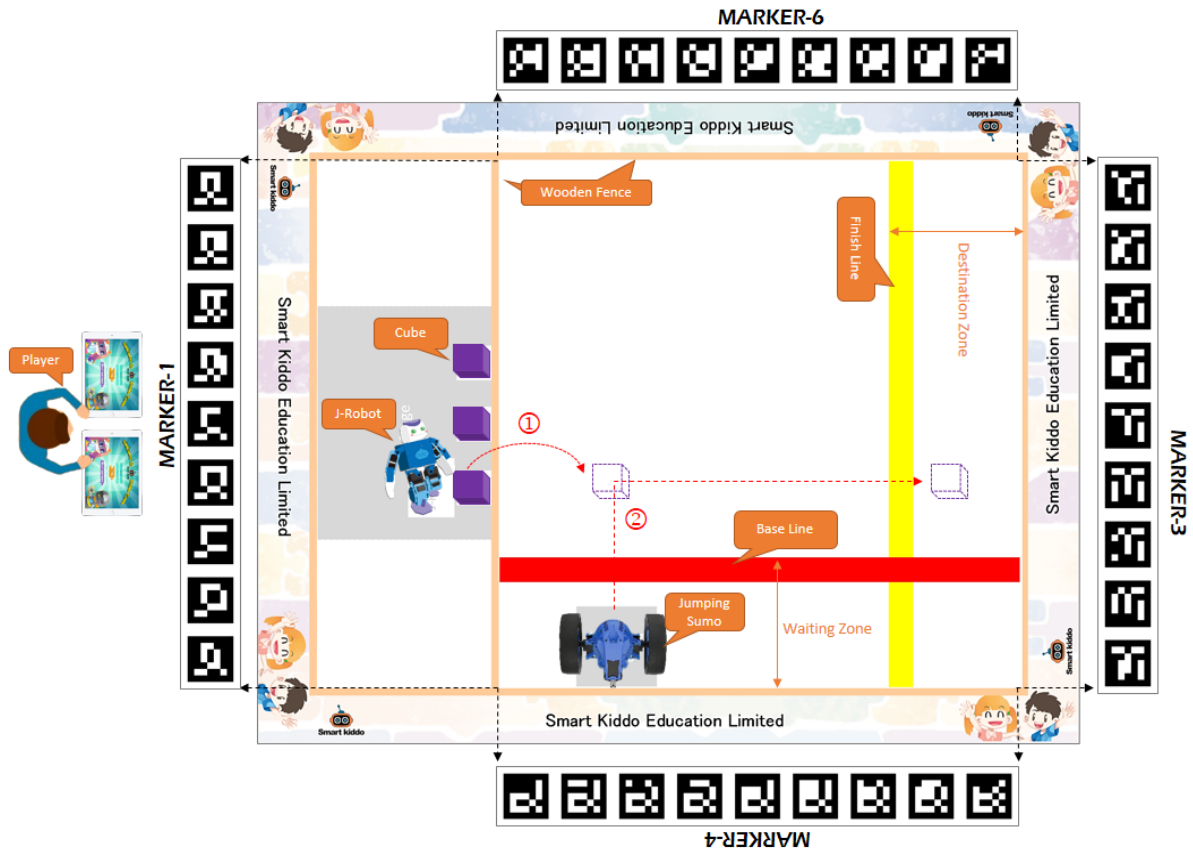
- Participating teams shall build programs with Google Blockly on "Kiddo Code" iPad app for one humanoid J-Robot to collaborate with one Jumping Sumo robot to do a mission: J-Robot picks up color cubes on floor and then throws over the wall to pass to Jumping Sumo robot, and Jumping Sumo robot pushes the color cubes to destination zone automatically using color and pattern recognitions.
- Team with the maximum number of color cubes in the destination zone in shortest time has highest score.

On The Competition Day

- Each participating team sends ONE team member for the competition
- This team member starts the Blockly program on one iPad for Jumping Sumo robot to push the color cubes thrown from another side of the wall to destination zone automatically, and uses virtual joystick on another iPad to control J-Robot to pick up color cubes on the floor, carry and throw them over the wall
- This team member CAN look at the arena during the competition. However, all members of the participating team are not allowed touch the robot once the competition is started.
- Team with maximum number of color cubes in the destination zone in shortest time has highest score.

The setup for the competition is shown below for reference only. The final setup of the arena may be different.

SENIOR SECONDARY - ROUND A



Sample Programs

- Two sample Google Blockly programs are provided to the participating teams once the participation is confirmed.
- One program illustrates the basic function to control the Jumping Sumo robot to push the color cubes thrown from another side of the wall to the destination zone and then go back to the wait zone to wait for next color cube automatically, and another program illustrates the basic function to control the J-Robot to walk and throw cubes over the wall by virtual joystick.
- Participating teams are encouraged to modify these programs in order to control the J-Robot and Jumping Sumo robot effectively to win the competition.

Round B: Push Cubes VS

Mission

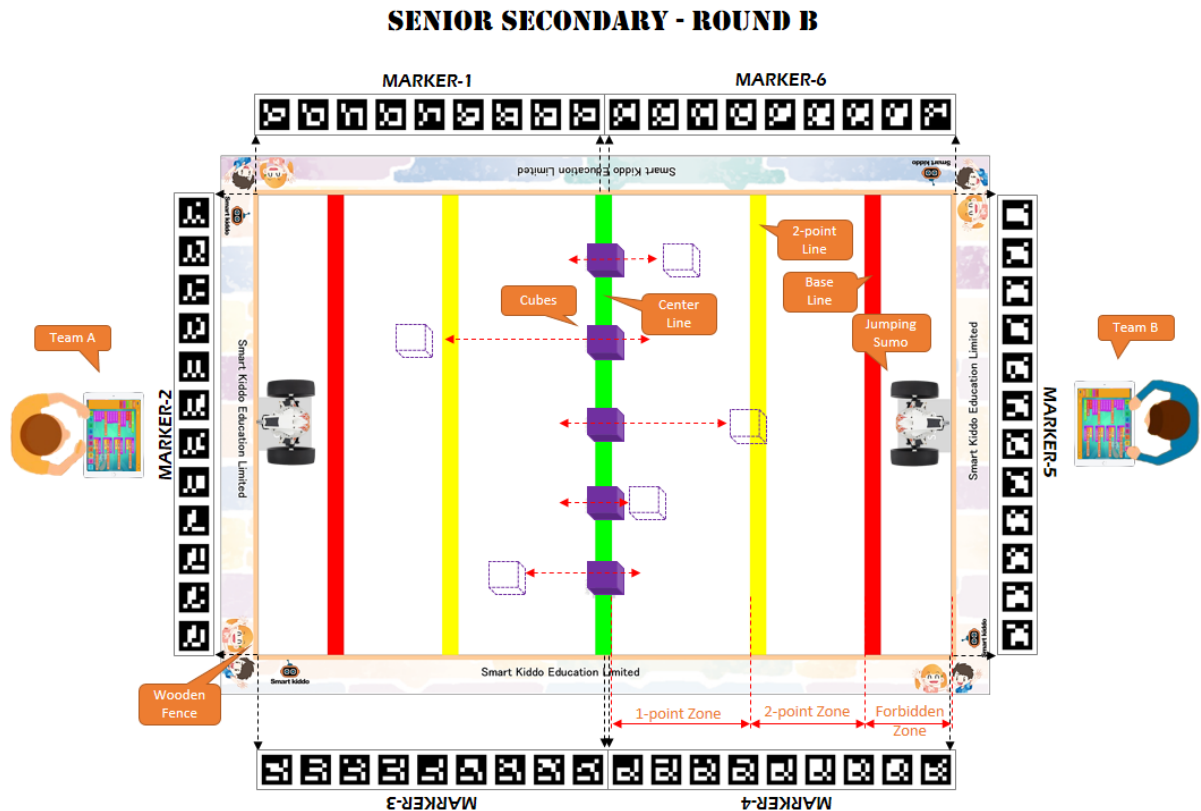
- Participating teams shall build programs with Google Blockly on "Kiddo Code" iPad app for one Jumping Sumo robot to compete with another team to push the cubes to opponent's zone automatically using color and pattern recognitions.
- Number of cubes remaining on the opponent's zone after the competition time will be the score of the team.

On The Competition Day

- Each participating team sends ONE team member for the Game.

- This team member starts the Blockly program on the iPad for Jumping Sumo to push the color cubes to opponent's zone automatically within a time limit.
- All members of the participating team are not allowed touch the robot once the competition is started.
- Number of cubes remaining on the opponent's zone after the competition time will be the score of the team.

The setup for the competition is shown below for reference only. The final design of the arena may be different.



Sample Programs

- A sample Google Blockly program is provided to the participating teams once the participation is confirmed.
- The program illustrates the basic function to control the Jumping Sumo robot to push the color cubes to opponent's zone automatically using color and pattern recognitions.
- Participating teams MUST modify this program in order to control Jumping Sumo robot effectively to win the competition

Final Score

- The final score is the score of Round A plus score of Round B.
- If multiple teams have same final scores, their rankings will be determined by the highest score among Round A and Round B
- The 3 teams that have highest final score win.

Equipment

All equipment provided by the Co-organisers. Participating teams do not have to purchase or assemble any equipment on their own

Kiddo Code Accounts

Once participation is confirmed, participating teams will be assigned with two student accounts for logging in to the "Kiddo Code" iPad app

Learning Workshops

We provide free pre-Competition learning workshops (optional) for participating teams to join and learn more about Kiddo Code and the sample Google Blockly programs provided.

Practice Workshops

Free practice workshops are available but optional. Participating teams should book time slot for practice. Since space and time slots are limited, we use the principle of fairness to all teams for reservations: Team has taken fewer practices before has a higher priority than the team taken more practices. The Co-organizers reserve the rights to refuse to provide practice in any space and time slots to a team.