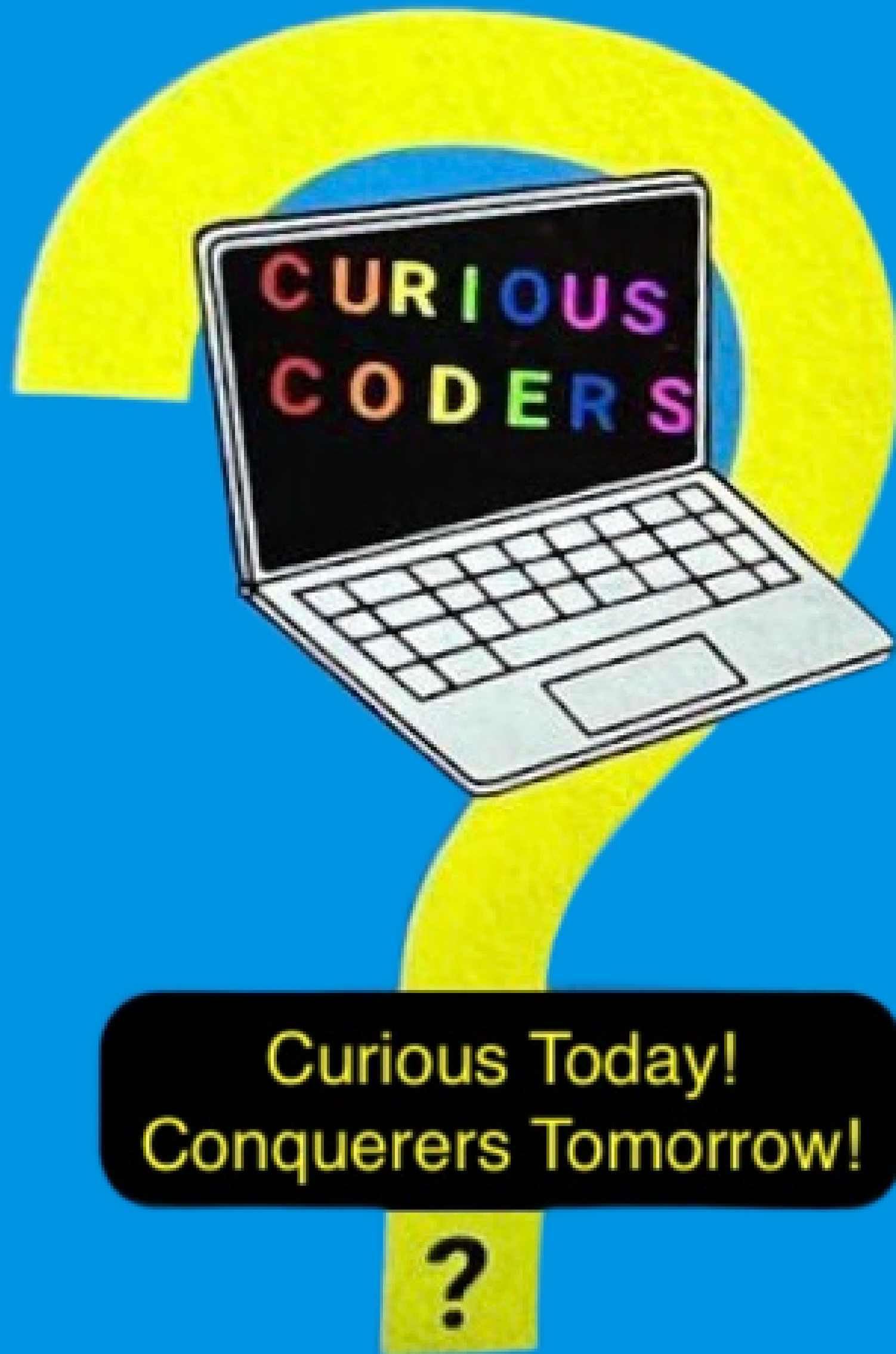


Curious Coders

Team #46000A



Curious Today!
Conquerers Tomorrow!

2023-2024 VEXIQ Robotics
ES VEXcode VR Skills Challenge Document

Mila Dayalu
Veda Pruvenna

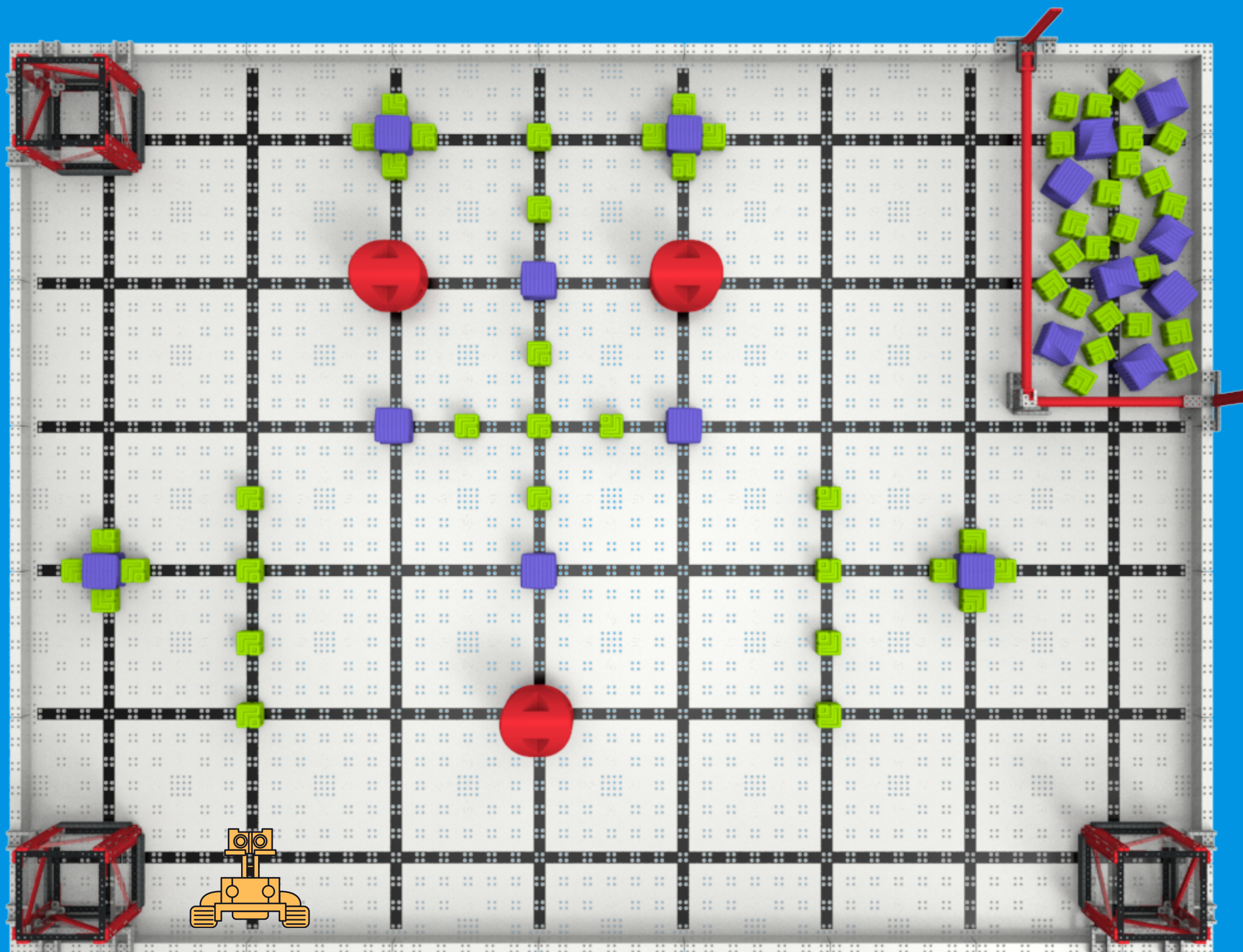
Shanaya Karamchandani
Svarsa Kovvur

```
define Drop_the_blocks Roller_run Reverse_run
```

Defining a block for dropping the green blocks to the goal

```
drive forward  
wait until Bumper5 pressed?  
stop driving  
drive reverse for Reverse_run mm  
Drop the blocks  
spin RollerMotor4 reverse  
wait Roller_run seconds  
stop RollerMotor4
```

No movement on the field



when started

Setting the Velocities. Driving and Turning to 90% to make robot move fast. Roller to 85% and Arm to 100%

set drive velocity to 90 %

set turn velocity to 90 %

set RollerMotor4 velocity to 85 %

set ArmMotors10_08 velocity to 100 %

set arm_limit to 720

set Arm_halfway to 420

Alignment using the back wall in case we set it up wrong

drive reverse for 10 mm

Phase 1 - Picking 2 blocks and putting them in goal 2. Minimum required to get uniform bonus of 10 pts

spin RollerMotor4 forward for 900 degrees and don't wait

drive forward for 350 mm

spin ArmMotors10_08 forward for arm_limit degrees

turn left for 130 degrees

Drive until bumper sensor in the front of the robot hits the goal. This is the position from where you can drop the blocks

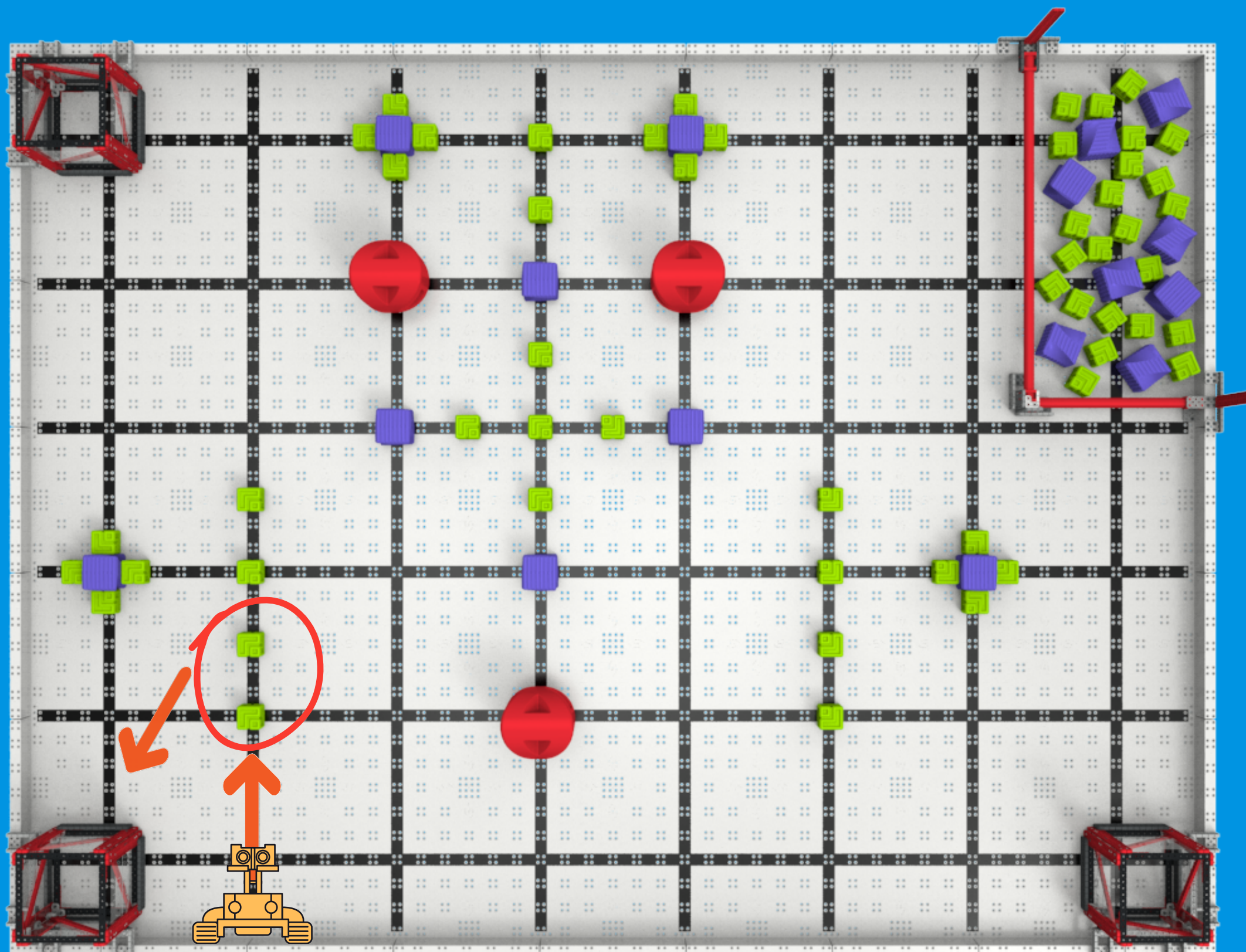
Drop_the_blocks 2 0

Backing up from goal

drive reverse for 270 mm

spin ArmMotors10_08 reverse for arm_limit degrees

Phase 1



Resetting robot at starting position, press touch sensor when ready

wait until TouchSense01 pressed?

Alignment using the back wall in case we set it up wrong

drive reverse for 10 mm

Phase 2 - Picking remaining 2 blocks and putting them in goal 3. Minimum required to get uniform bonus of 10 pts. Also knocking over 2 red blocks

spin RollerMotor4 forward for 1400 degrees and don't wait

drive forward for 1160 mm

turn left for 33 degrees

spin ArmMotors10_08 forward for arm_limit degrees

Drive until bumper sensor in the front of the robot hits the goal. This is the position from where you can drop the blocks in the goal

Drop_the_blocks 1.5 0

Backing up from goal

drive reverse for 300 mm

turn left for 20 degrees

drive reverse for 150 mm

Bringing arm halfway down and turning 220 degrees to knock off the red block

spin ArmMotors10_08 reverse for Arm_halfway degrees

turn right for 220 degrees

Going toward second red block and turning 325 degrees to knock off the red block

drive forward for 830 mm

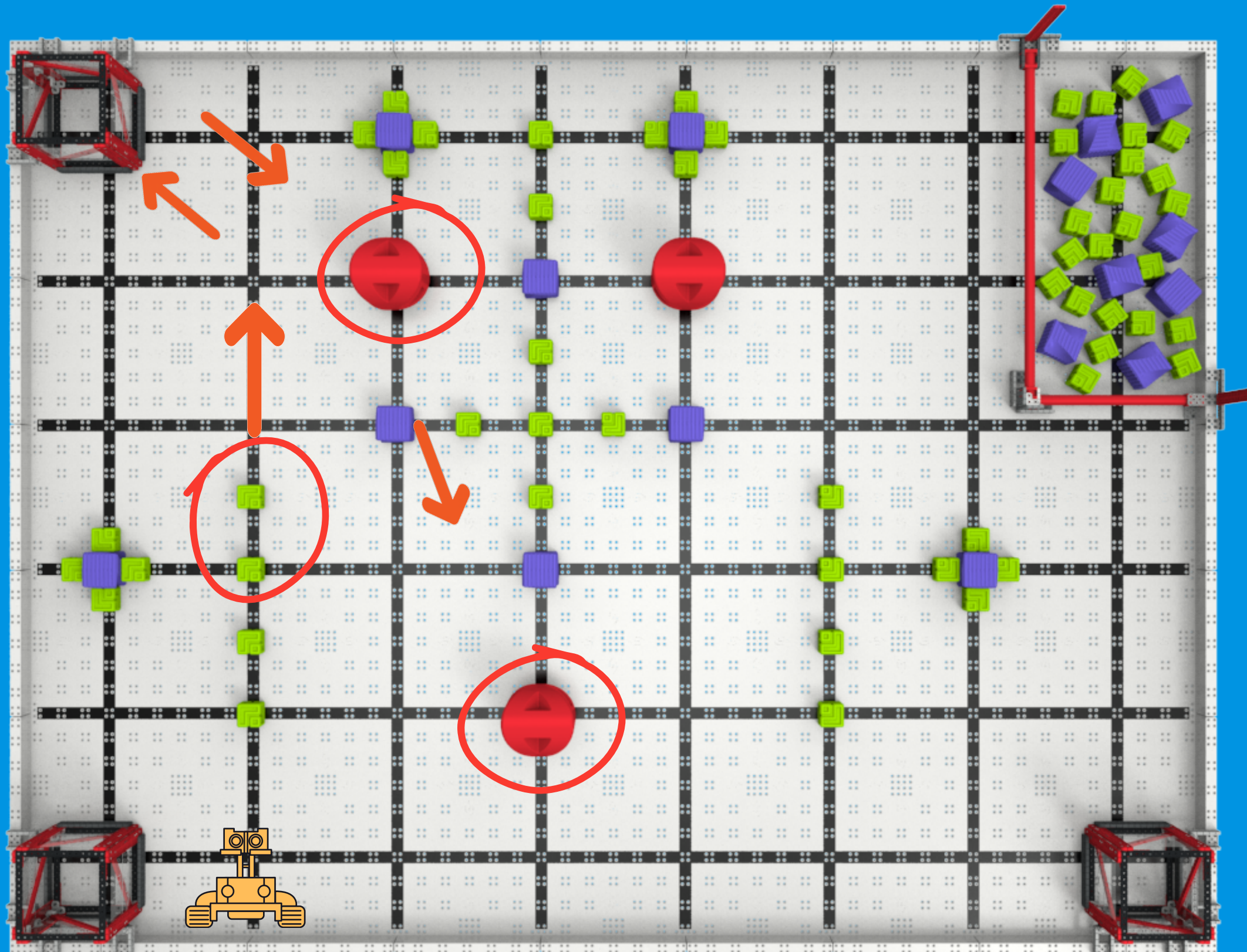
turn left for 325 degrees

drive forward for 100 mm and don't wait

Lowering the arm

spin ArmMotors10_08 reverse for arm_limit - Arm_halfway degrees

Phase 2



Resetting robot at starting position, press touch sensor when ready

wait until TouchSense01 pressed?

Alignment using the back wall in case we set it up wrong

drive reverse for 10 mm

Phase 3 - Picking up 4 blocks and putting them in goal 1. Also knocking over remaining red block and partial parking

spin RollerMotor4 forward for 1600 degrees and don't wait

drive forward for 1100 mm

stop driving

spin RollerMotor4 forward for 300 degrees and don't wait

Bringing arm halfway down and turning 178 degrees to knock off the red block

spin ArmMotors10_08 forward for arm_limit - Arm_halfway degrees

turn left for 178 degrees

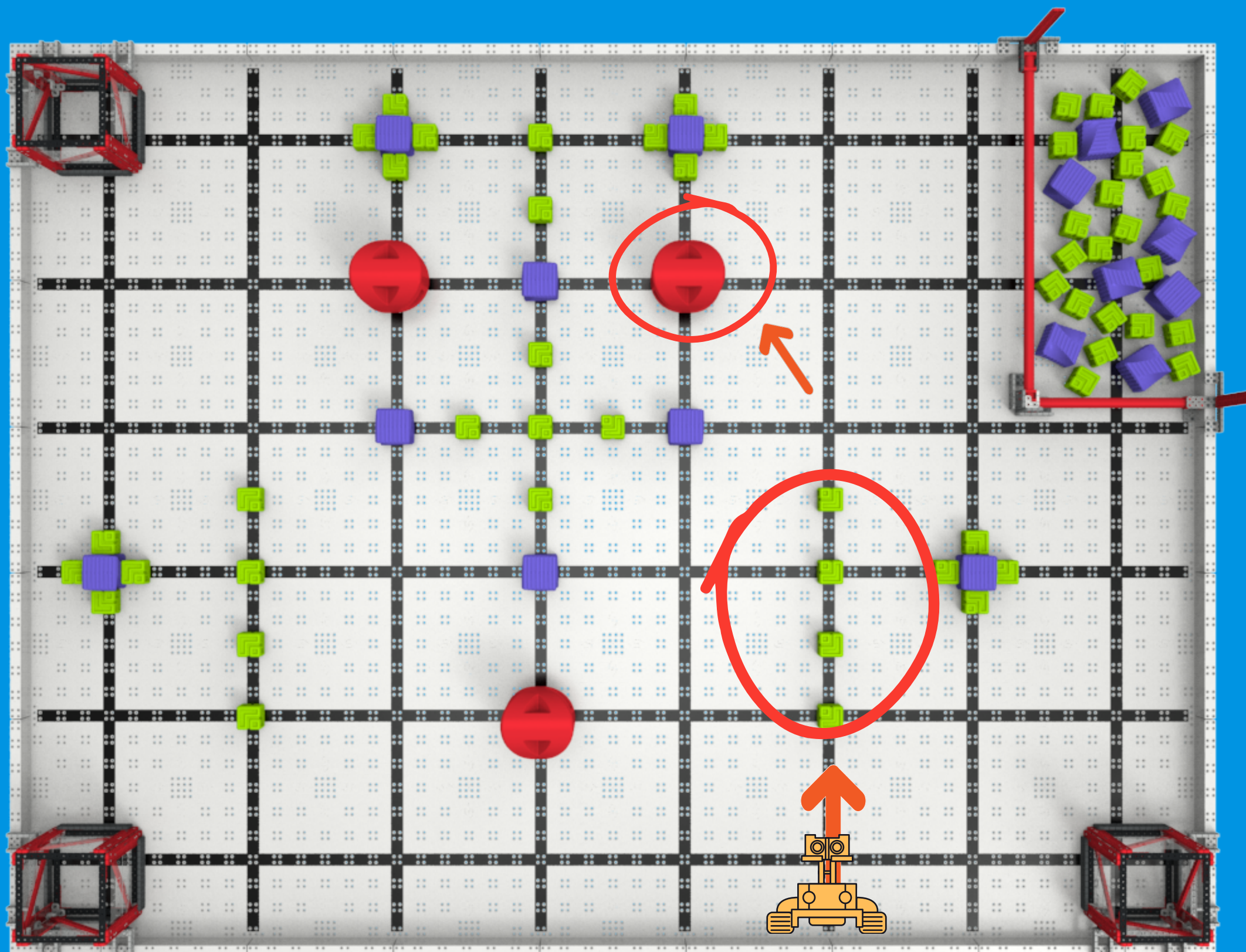
Drive towards the wall near goal 1, stop when the bumper sensor hits the wall.

drive forward

wait until Bumper5 pressed?

stop driving

Phase 3



Move slow, the tray has 4 blocks and is raised

set drive velocity to 50 %

set turn velocity to 50 %

drive reverse for 100 mm

turn left for 85 degrees

set drive velocity to 70 %

set turn velocity to 70 %

Raise the Arm higher

spin ArmMotors10_08 forward for Arm_halfway degrees

Drive towards goal 1 until bumper sensor in the front of the robot hits the goal. This is the position from where you can drop the blocks in the goal

Drop_the_blocks 2 50

Increase the Velocity and Drive to do partial parking

set drive velocity to 90 %

set turn velocity to 90 %

drive reverse for 100 mm

turn left for 90 degrees

drive forward for 900 mm

turn right for 40 degrees

Phase 3 Cont.

