



10.5 A team in a game

Competing · Robot club · about 14 min

Name _____

Class _____

Date _____

What this lesson is about

Radio in a game, agreeing roles without talking, and swapping jobs when the score says so.

- Saying who does what
- A rule that settles it without talking
- Swapping jobs

Questions

6 marks in all

1. In a game, who hears your `send("striker")` ? [1 mark]

- ☐ A Every robot on the mat, including the other team
- ☐ B Only your team mates
- ☐ C Only robots within 50 cm
- ☐ D Only the game's scorer

2. What does this program print? [1 mark]

```
team = ["bot-7", "bot-2"]
for me in team:
    job = "attack" if me == min(team) else "defend"
    print(me, job)
```

3. What does this program print? [1 mark]

```
team = ["bot-10", "bot-9"]
print(min(team))
```

4. Why is a rule like the name that sorts first attacks often better than agreeing by radio? [1 mark]

- ☐ A It cannot be jammed, cannot arrive late, and works on the first tick
- ☐ B It lets you change jobs more often
- ☐ C The other team cannot read your name
- ☐ D Radio does not work in games

5. Your attacker has been taken out. What should the defender do? [1 mark]

- ☐ A Become the attacker
- ☐ B Keep defending, since jobs are fixed
- ☐ C Stop and wait for the attacker to return
- ☐ D Send the score to the other team

6. In the task, a robot sends `attack` and then drives to the near base. What is wrong?

[1 mark]

- ☐ A What it said and what it did do not match: attack means the far base
- ☐ B Nothing, the message is what counts
- ☐ C It should not send anything
- ☐ D `attack` should be in capitals

The task: call it and go

Send a message saying which job you are taking, then do it: drive to the base zone that matches. This time the job is attack: send `attack`, then drive to the far base, up the mat and to the left. (Defending would mean the near base, down and to the right.)

```
from bugbot import *
connect()

# say what you are doing, then do it
send("attack")
```

Plan your program here, then type it in and press Run.



Do it on the robot

www.bugbotlab.com/learn/10-5-a-team-in-a-game/

The simulator checks it and tells you when it passes. Nothing to install, no account.

Challenges

1. Choose the job from the robot's own name with `min()`, as above, and send what you chose.
2. Print everything `messages()` gives you for ten seconds, so you can see what a busy game sounds like.
3. Send a message when you arrive, so a team mate knows the job is done.