PRESENTATION 17 · LEARNING WITH STATEMENTS

Timer

No position, no walls to see: drive for the right number of seconds, then stop.

TheBotCup 2026 · AiBotCup Simulator



RECAP

Conditions we have used

Ultrasonic
how far the walls are

Colour
what is under the robot

Position
where the robot is

Time
new today

One row is still unused in the Conditions panel: **Time**.

PART 1

The mission: Session 17

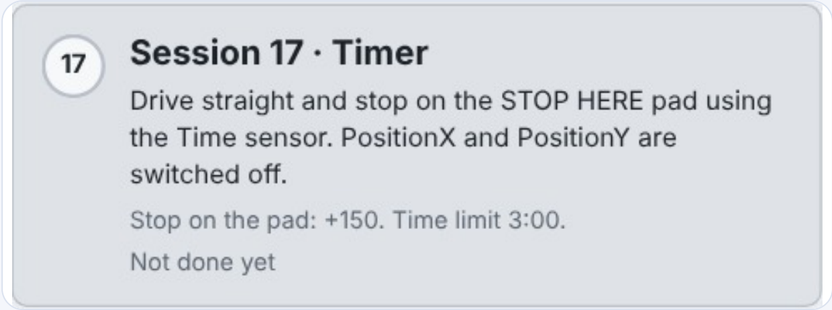
Stop on the pad, by time

SESSION 17 · TIMER

Drive straight, stop on STOP HERE

Use the **Time** sensor. Position X and Y are **switched off**.

On the pad: **+150**. Time limit **3:00**. At most **6** statements.





THE FIELD

One straight line

START bottom centre, facing **up**.

The pink **STOP HERE** pad is straight ahead.

Nothing to see on the way: **only time** helps.

PART 2

Time as a condition

Seconds since Play

THE IDEA · THE TIME SENSOR

A clock you can test

Time

counts whole **seconds** while the robot runs: 0, 1, 2, 3…

In Conditions

Time min **0**, max **4** = “during the first seconds”.

Same speed every time + same seconds = **same distance**.

THE PLAN

Go while time is small, then Stop

1 Go

Time 0–4 → drive



2 Stop

otherwise → wheels 0

Top to bottom, first match wins: Go while Time ≤ 4, then Stop takes over.

PART 3

Step by step in statements

Just two statements

STEP 1 · THE WHOLE PROGRAM

The shortest program so far

Statement	Condition	Wheels	Duration
1 Go	Time 0–4	4.5 / 4.5	60 ms
2 Stop	none	0 / 0	60 ms

The number to find is the **max** of Time. We tested **4**.

STEP 2 · STATEMENTS 1 AND 2

Go and Stop

1 Go
Time 0–4

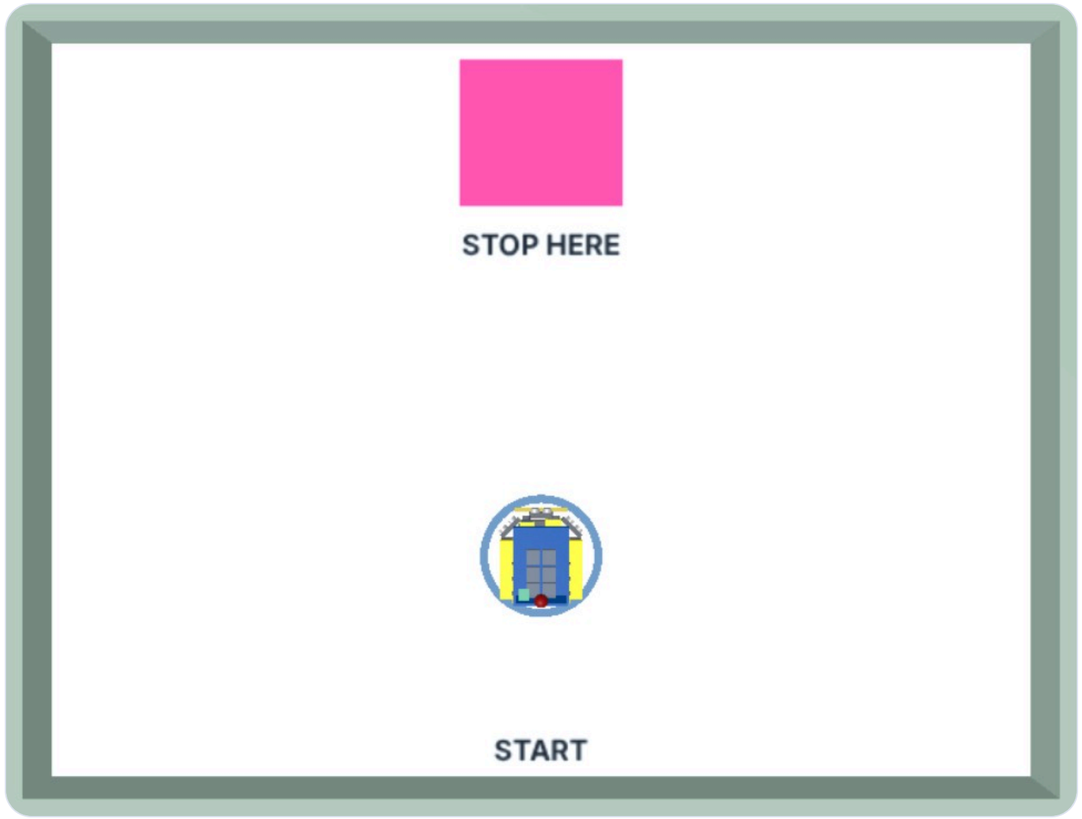
X	0	1000	(PositionX)
Y	0	1000	(PositionY)
Compass	0	360	(Compass)
Time	0	4	(Time)

Duration	60	ms
Key Action	None	
WheelLeft	4.5	
WheelRight	4.5	

2 Stop
no conditions

Duration	60	ms
Key Action	None	
WheelLeft	0.0	
WheelRight	0.0	

In Go, only the **Time** row changes: min 0, max 4.



STEP 3 · RUN · EARLY

Go is running

Position

X 0 (PositionX)

Y 0 (PositionY)

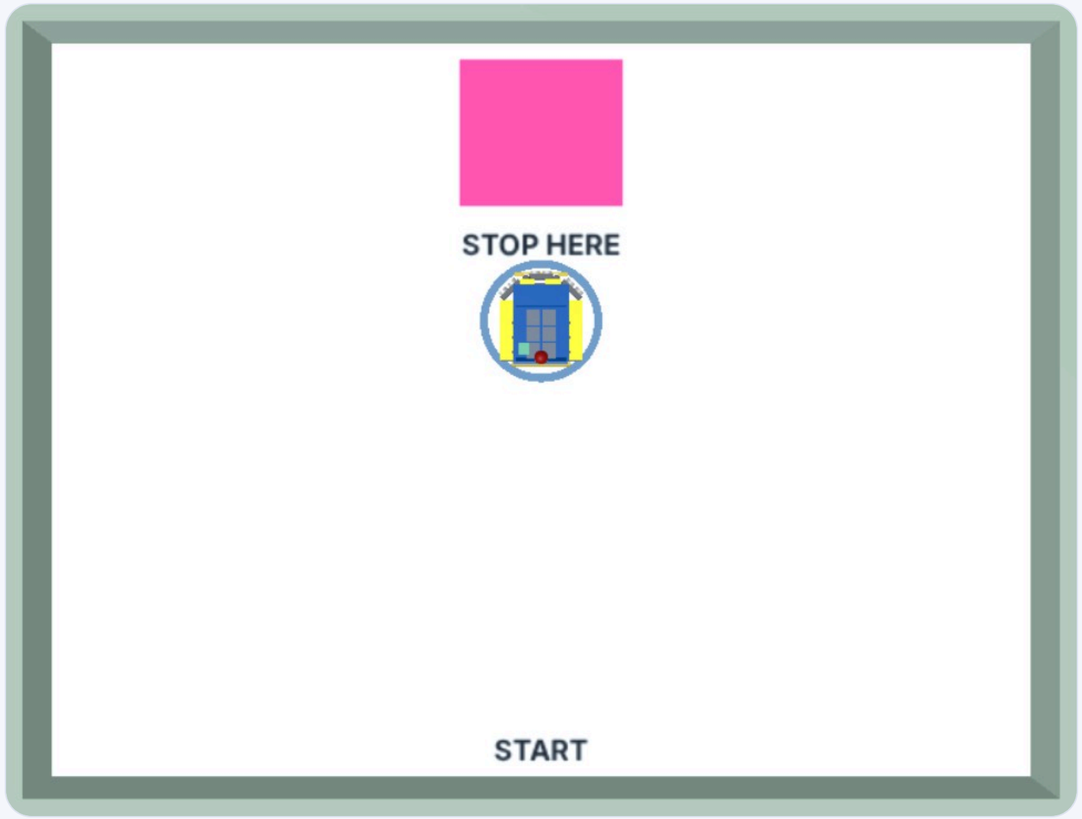
Compass

0 (Compass)

Time

1 (Time)

Position reads **0, 0**: switched off. Time **1** is in 0–4: **Go**.



STEP 4 · RUN · 0:04

At the pad

Position

X — 0 (PositionX)

Y — 0 (PositionY)

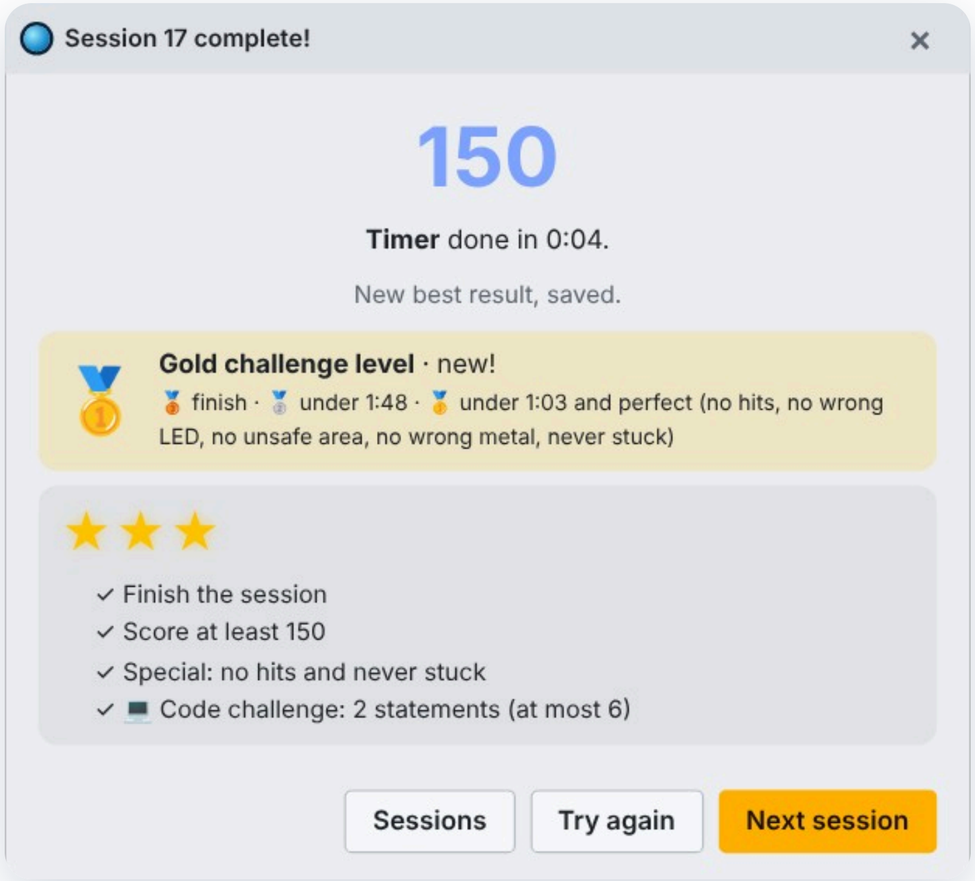
Compass

0 (Compass)

Time

4 (Time)

Time **4**: the robot reaches the pad and the session completes.



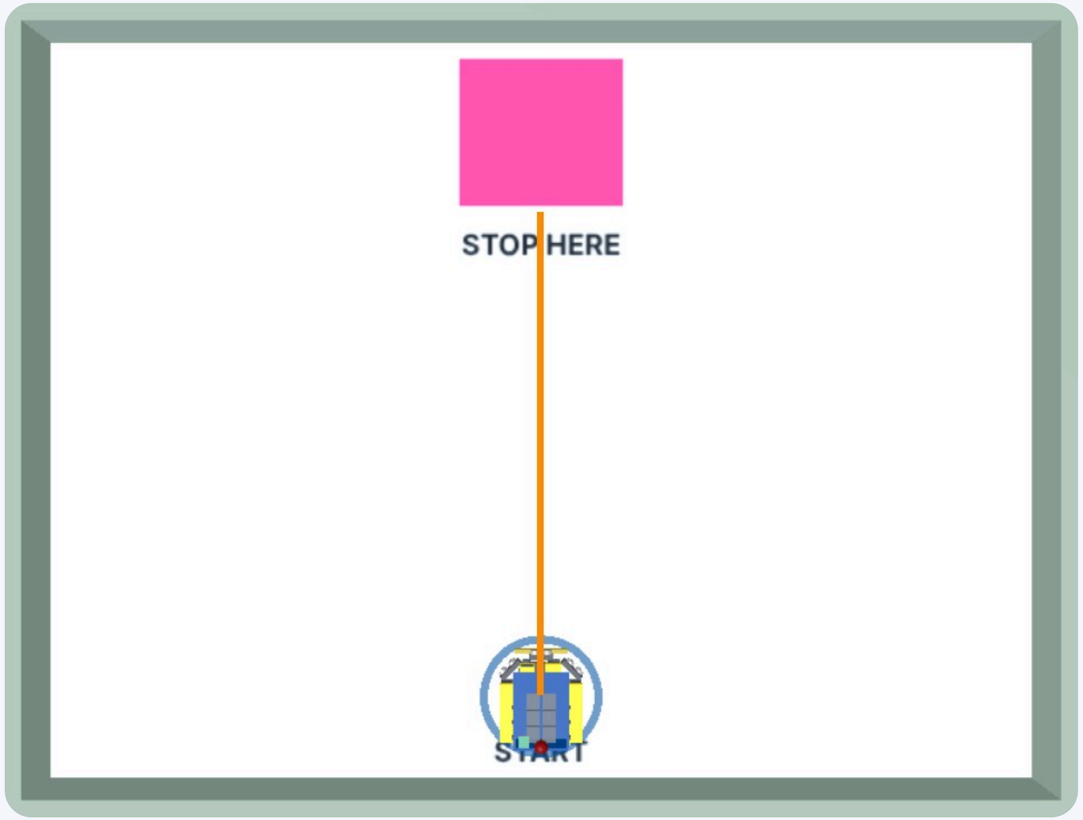
RESULT · TESTED

150 points in 0:04 · Gold

Medals · Silver: under 1:48 · Gold: under 1:03 and perfect.

Stars · finish · 150 · no hits and never stuck.

Code challenge · at most 6 statements. We used 2.



THE PATH · RECORDED

One straight line

START to the pad, nothing else.

When nothing can be seen, **time** is a sensor too.

DID NOT WORK?

Check first, then tune carefully

What you see	What to do
Stops before the pad	Raise the Time max by 1
Drives past the pad	Lower the Time max by 1
Never stops	**Stop** must be below Go, with wheels 0 / 0
Old program still on the robot	**Build** again, then **Load** on BLUE

NEXT TIME

Presentation 18 · Search and return

Find two metals and bring them back to **the deposit box** you started in.