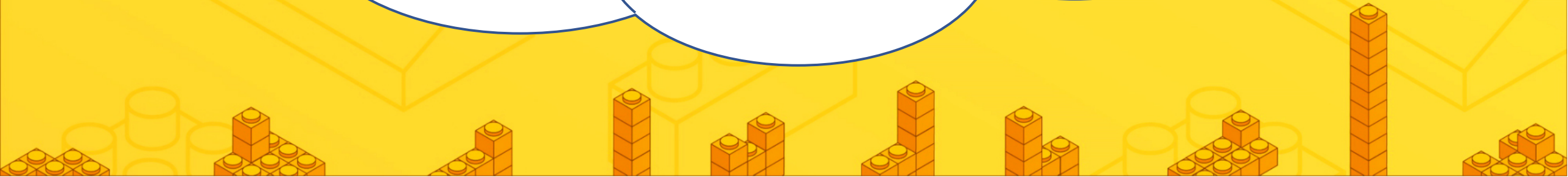




# Dance and Turn

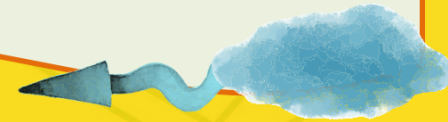


# Target

- **Learn to use angles to complete robot turns.**
- **Perform movements in various shapes.**
- **Master the upload and run functions.**



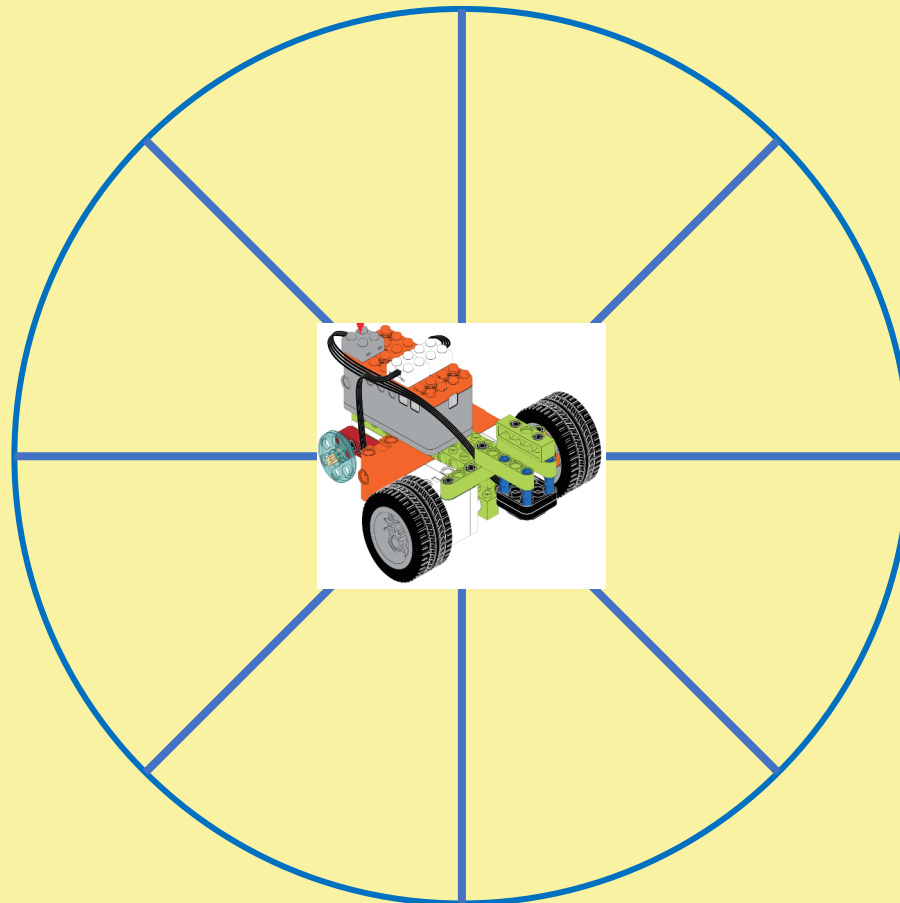
# 01 Task





# Task

**Task: Make the car rotate in place**





# Task

## Task 1: Turn at right angles

Using the angle control from the last lesson, let's try to complete the turning action.

There is a certain delay in online mode and you need to wait for a while.

```
when clicked
  set 1# ext servo's origin
  set 2# ext servo's origin
  wait 0.3 seconds
  set 1# ext servo to rotate relative angle 0 degrees at 30 (0~100)% speed
  set 2# ext servo to rotate relative angle 0 degrees at 30 (0~100)% speed
```

How many more angles do we need to use to turn 90 degrees? Try it a few more times.





# Task

## Task 1: Turn at right angles

Referrable program

```
when clicked
  set 1# ext servo's origin
  set 2# ext servo's origin
  wait 0.3 seconds
  set 1# ext servo to rotate relative angle 230 degrees at 30 (0~100)% speed
  set 2# ext servo to rotate relative angle 230 degrees at 30 (0~100)% speed
```

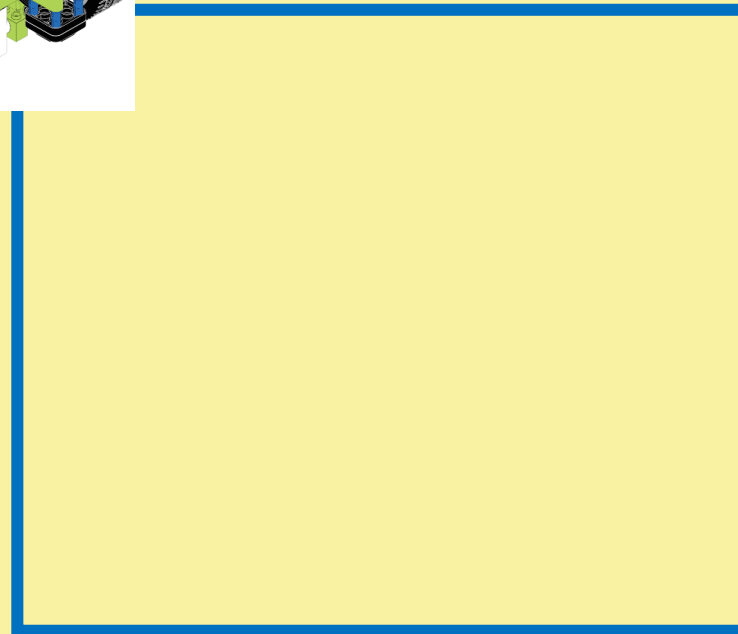
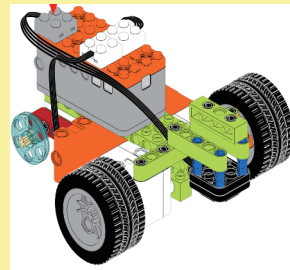




# Task

## Task 2: Make the car move in a square

Control through relative angle



# Coding Technique 1



```
when clicked
  set 1# ext servo's origin
  set 2# ext servo's origin
  wait 0.1 seconds
  set 1# ext servo to rotate relative angle 215 degrees at 50 (0~100)% speed
  set 2# ext servo to rotate relative angle 215 degrees at 50 (0~100)% speed
  wait until 1# ext servo done
  wait until 2# ext servo done
```

When performing multiple actions, first ensure that the previous action is completed. Add a wait time.





# Task

## Task 2: Make the car move in a square

A square is a straight line with a right angle four times. First, complete the straight line and right angle once.

```
when clicked
  set 1# ext servo's origin
  set 2# ext servo's origin
  wait 0.1 seconds
  set 1# ext servo to rotate relative angle -360 degrees at 30 (0~100)% speed
  set 2# ext servo to rotate relative angle 360 degrees at 30 (0~100)% speed
  wait until 1# ext servo done
  wait until 2# ext servo done
  set 1# ext servo's origin
  set 2# ext servo's origin
  wait 0.1 seconds
  set 1# ext servo to rotate relative angle 215 degrees at 30 (0~100)% speed
  set 2# ext servo to rotate relative angle 215 degrees at 30 (0~100)% speed
  wait until 1# ext servo done
  wait until 2# ext servo done
```

There is a certain delay in online mode and you need to wait for a while.





# Task

## Task 2: Make the car move in a square

Adding a loop count will solve the issue. Don't forget to add a delay for each action in online mode!

```
when clicked
repeat 4
  set 1# ext servo's origin
  set 2# ext servo's origin
  wait 0.1 seconds
  set 1# ext servo to rotate relative angle -360 degrees at 30 (0~100)% speed
  set 2# ext servo to rotate relative angle 360 degrees at 30 (0~100)% speed
  wait until 1# ext servo done
  wait until 2# ext servo done
  set 1# ext servo's origin
  set 2# ext servo's origin
  wait 0.1 seconds
  set 1# ext servo to rotate relative angle 215 degrees at 30 (0~100)% speed
  set 2# ext servo to rotate relative angle 215 degrees at 30 (0~100)% speed
  wait until 1# ext servo done
  wait until 2# ext servo done
```

Four movements can lead to cumulative errors. You can try adjusting the turning angle.



**Task**

**Additional task:  
Can you use angle control  
to complete a triangle and a  
hexagon?**

