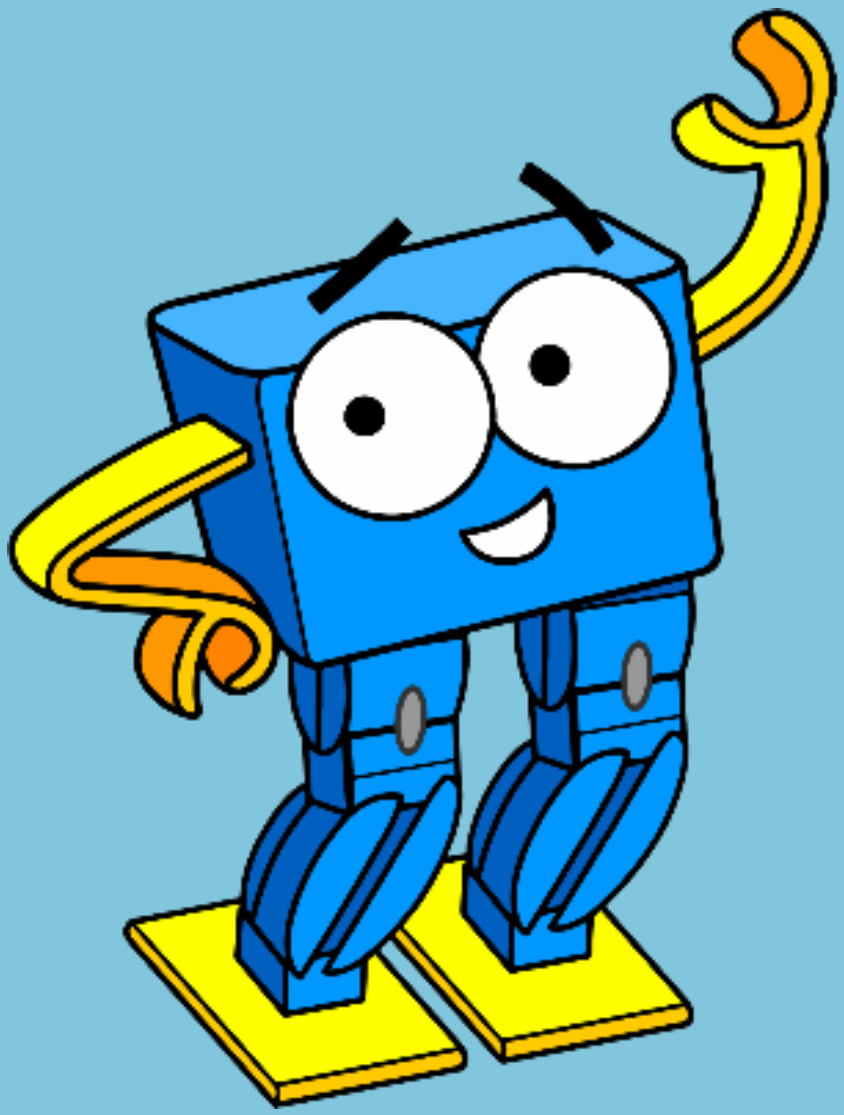


Marty the Robot Workbook

Programming Concepts 1

Student Name:

Lesson 1 – Introduction to Loops

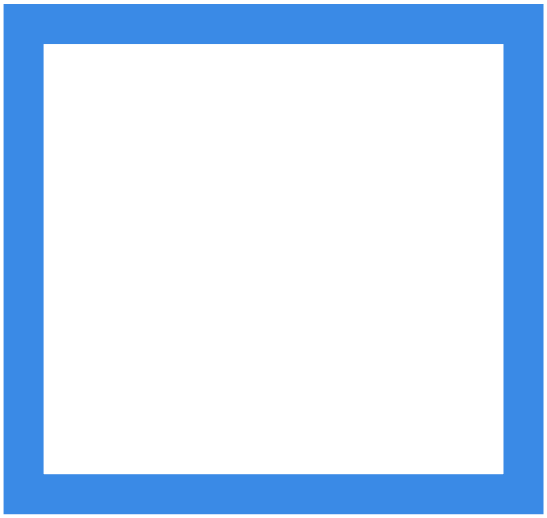
Here are the instructions that you are allowed to use…

Move forward by [number] of steps

Move backwards by [number] of steps

Turn left by [degrees]

Turn right by [degrees]



Try writing out some instructions to get someone to walk in a square!

Move forward by 2 steps

Turn right by 90 degrees

Move forward by 5 steps

Turn right by 90 degrees

Move forward by 2 steps

Turn right by 90 degrees

Move forward by 5 steps

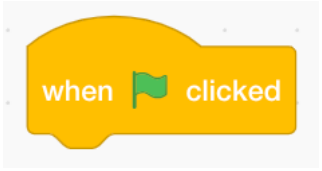
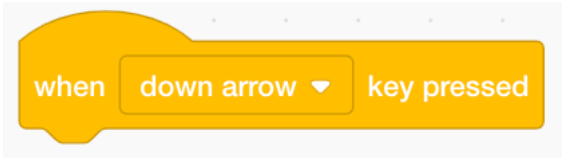
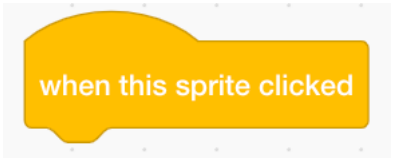
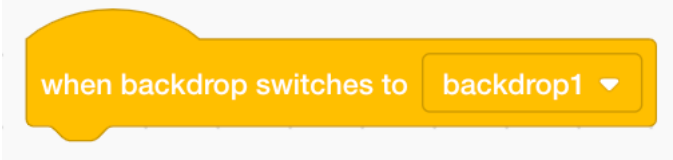
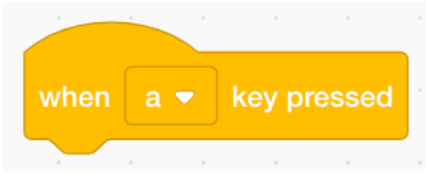
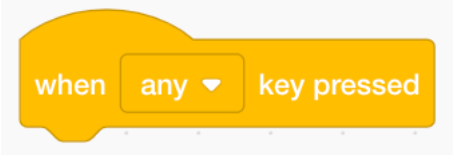
Turn right by 90 degrees

How would you change the instructions above to include loops?

REPEAT _____ times:

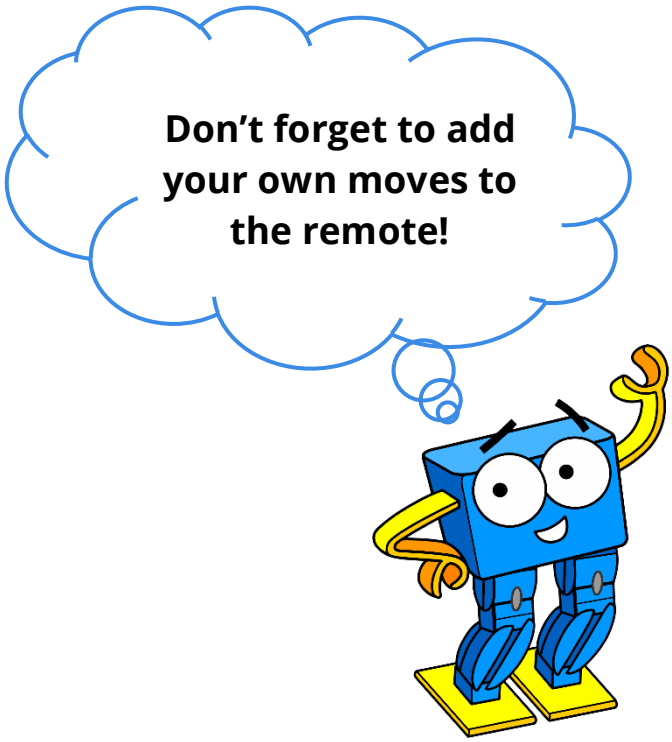
Lesson 2 – Introduction to Events

What do the following event blocks do?

Block	What it does
	
	
	
	
	
	

Plan out your remote control program by deciding which events will trigger which action/movements

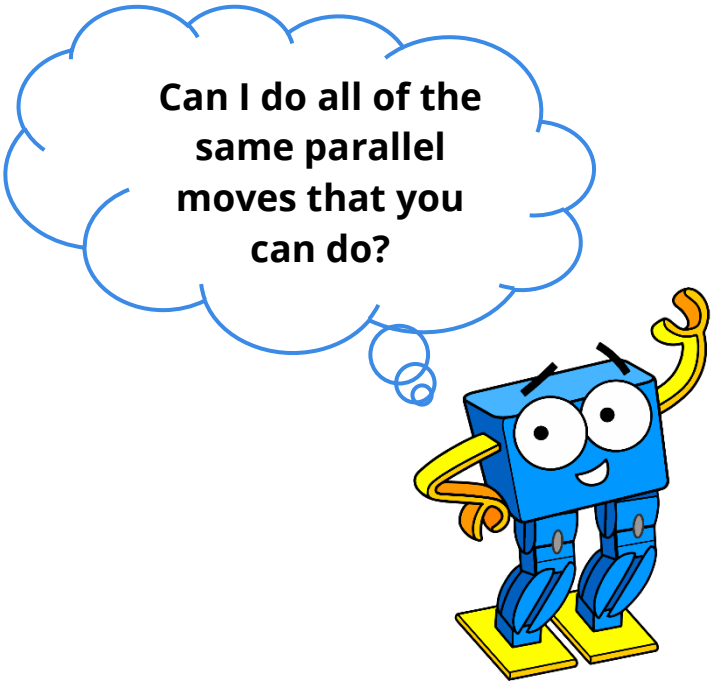
Event	Action/Movement
	Walk forwards
	Walk backwards
	Sidestep to the left
	Sidestep to the right



Lesson 3 – Parallel Programming

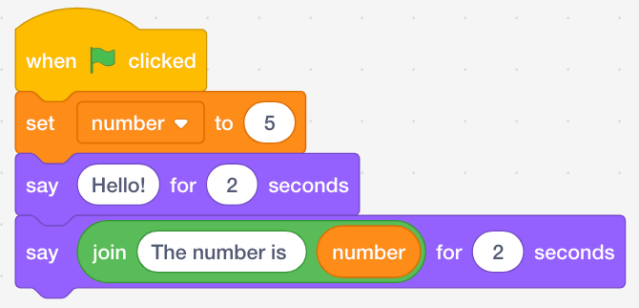
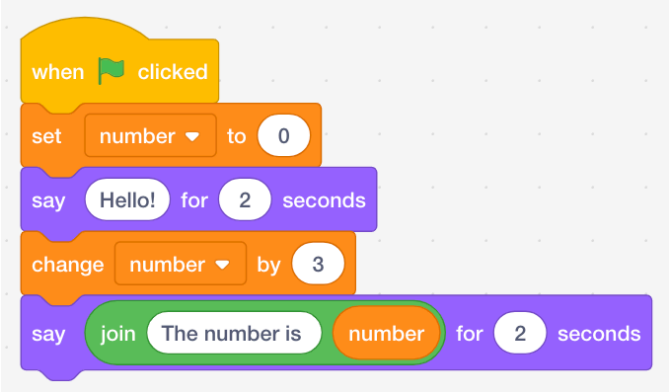
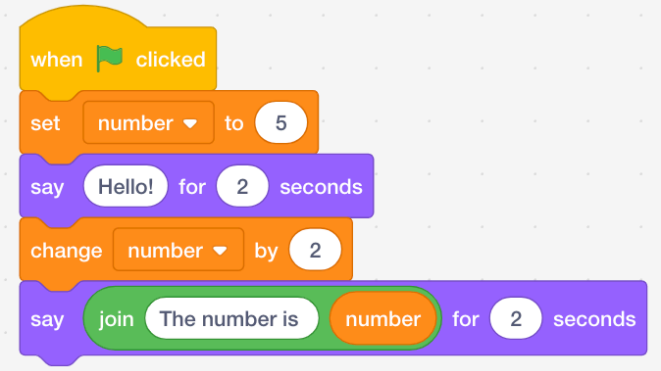
Fill in the following table by thinking about whether you could do the following moves at the same time and then whether Marty could do them...

Moves	Me	Marty
Lift up **both** arms		
Lift up one arm **and** kick one leg		
Kick **both** legs		
Lean left **and** lift one arm		
Lean right **and** kick your right leg		
Lift up **both** arms **and** kick one leg		



Lesson 4 – Introduction to Variables

Predict the number that our sprite will say at the end of these small programs

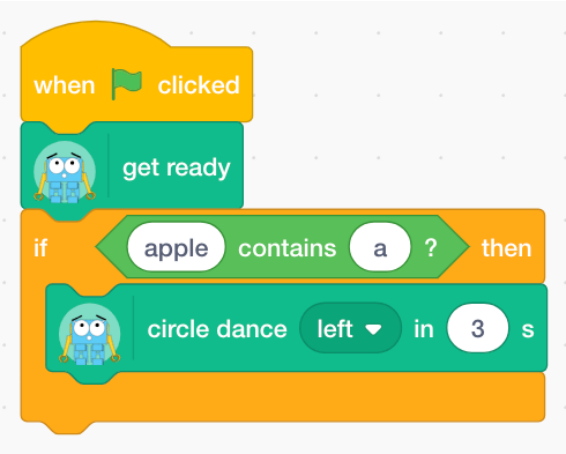
Snippet from Program	Value at the End
	
	
	

Lesson 5 – Introduction to If Statements

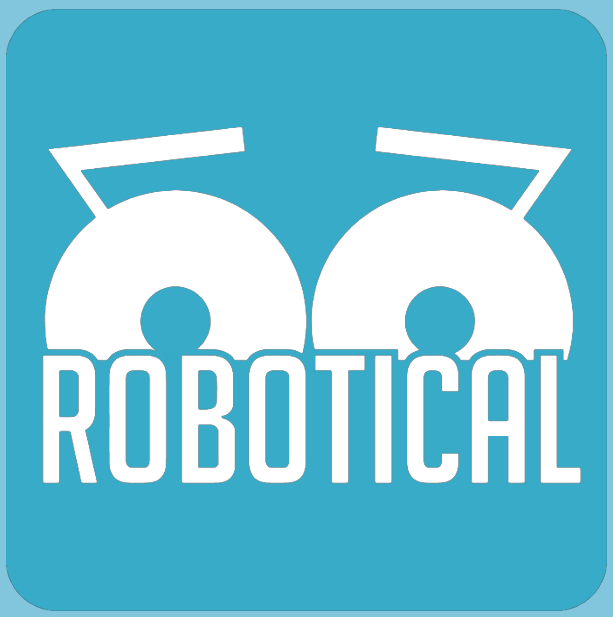
Try thinking up some examples of IF statements, one has been completed for you already!

IF there is a green man THEN it is safe to cross the road

What do you think Marty will do when we run the following code blocks?




when clicked
get ready
set number to 8
if number > 10 then
wiggle
else
walk 2 steps forwards


ROBOTICAL