

The Scratch logo is rendered in a stylized, bubbly font. The letters are orange with a white fill and a thick blue outline. The background is a gradient of blue, with a decorative circuit board pattern of white lines and circles on the left side.

# SCRATCH

## 04 – EVENTS AND CONTROL

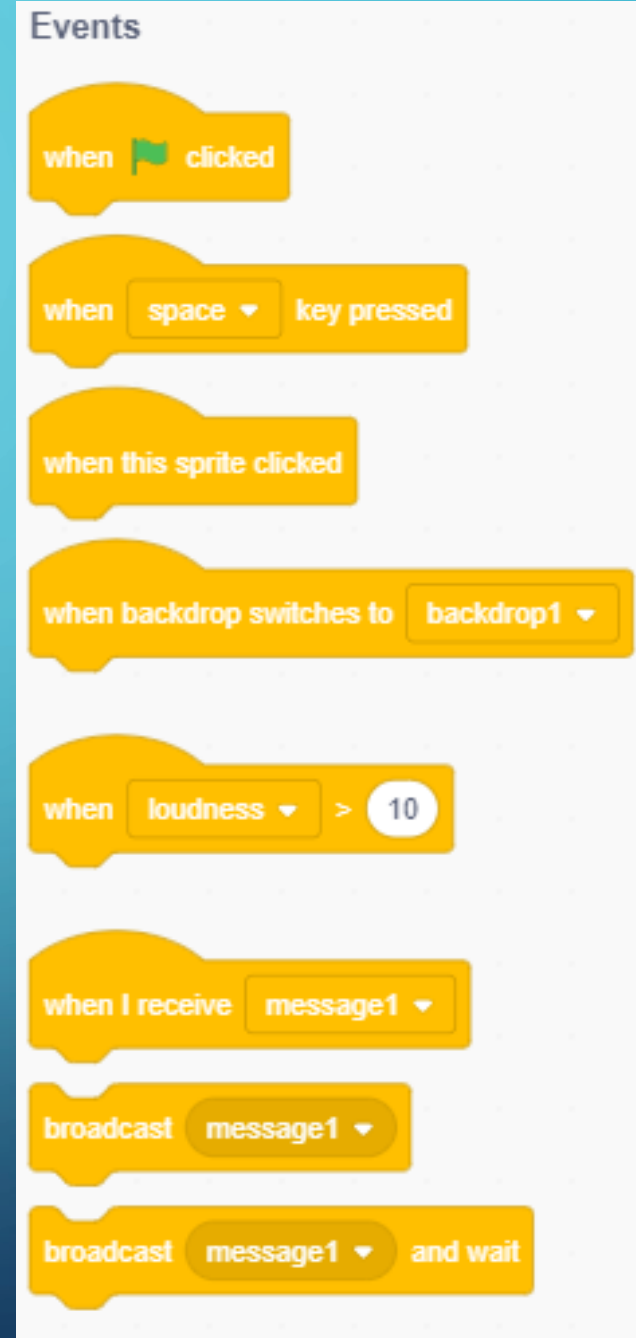
M1U1P4 COMPUTER SCIENCE

The image features a dark blue gradient background with white circuit-like lines in the corners. These lines consist of straight paths that branch out and terminate in small circles, resembling a network or data flow diagram. The lines are positioned in the top-left, top-right, bottom-left, and bottom-right corners, framing the central text.

WHAT CATEGORY DO WE USE FOR EVENTS?

# EVENTS CATEGORY

- Event category has blocks that control events and triggering the scripts
- They are represented by yellow color
- There are 8 event blocks



A yellow Scratch block with a green flag icon in the center. The text 'when' is on the left, the flag icon is in the middle, and 'clicked' is on the right.

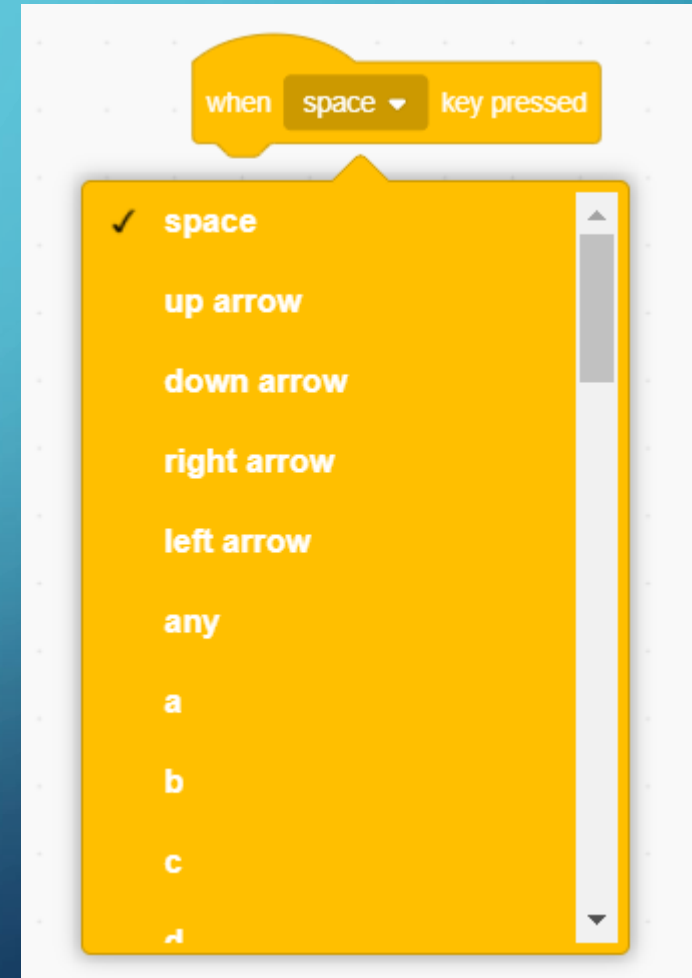
when  clicked

- It is used at the beginning of the code
- When the green flag is clicked something will happen



when space ▼ key pressed

- This block of code is used when we want to run the code by pressing a button on the keyboard
- We can select any key on the keyboard
- This way we can control our character



# TASK 1: CHARACTER CONTROLLER

- You are a programmer in a game development company. Your task is to create a character controller. The instructions are:
  - When the player presses UP arrow the character will move up
  - When the player presses DOWN arrow the character will move down
  - When the player presses LEFT arrow the character will move left
  - When the player presses RIGHT arrow the character will move right
  - When the player presses SPACE key the character will say “Hello” for 2 sec

# TASK 1: CHARACTER CONTROLLER

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when up arrow key pressed  
change y by 10

when down arrow key pressed  
change y by -10

when left arrow key pressed  
change x by -10

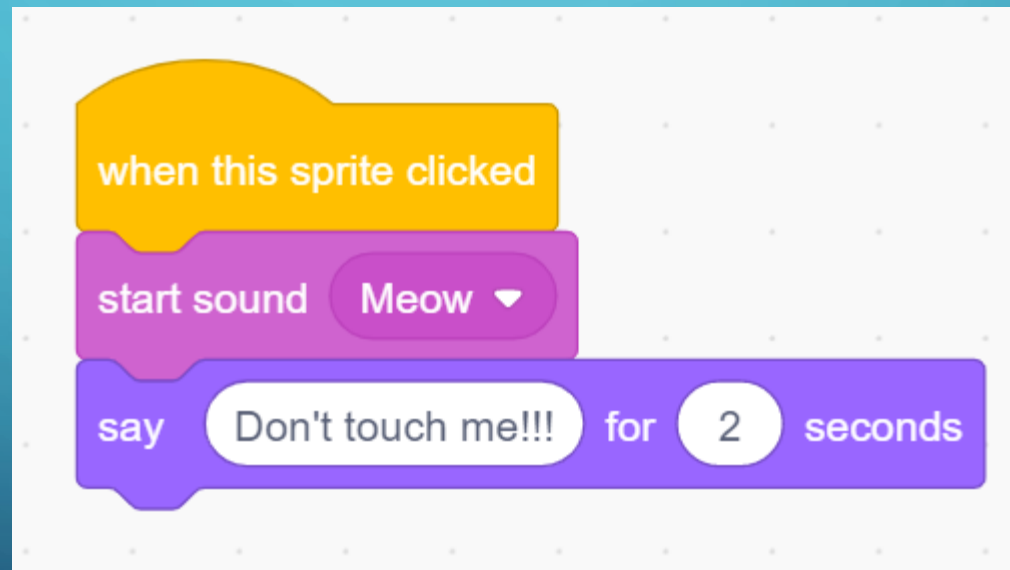
when right arrow key pressed  
change x by 10

when space key pressed  
say Hello! for 2 seconds



when this sprite clicked

- Example: Don't touch the cat









Sprite  ↔ x  ↕ y

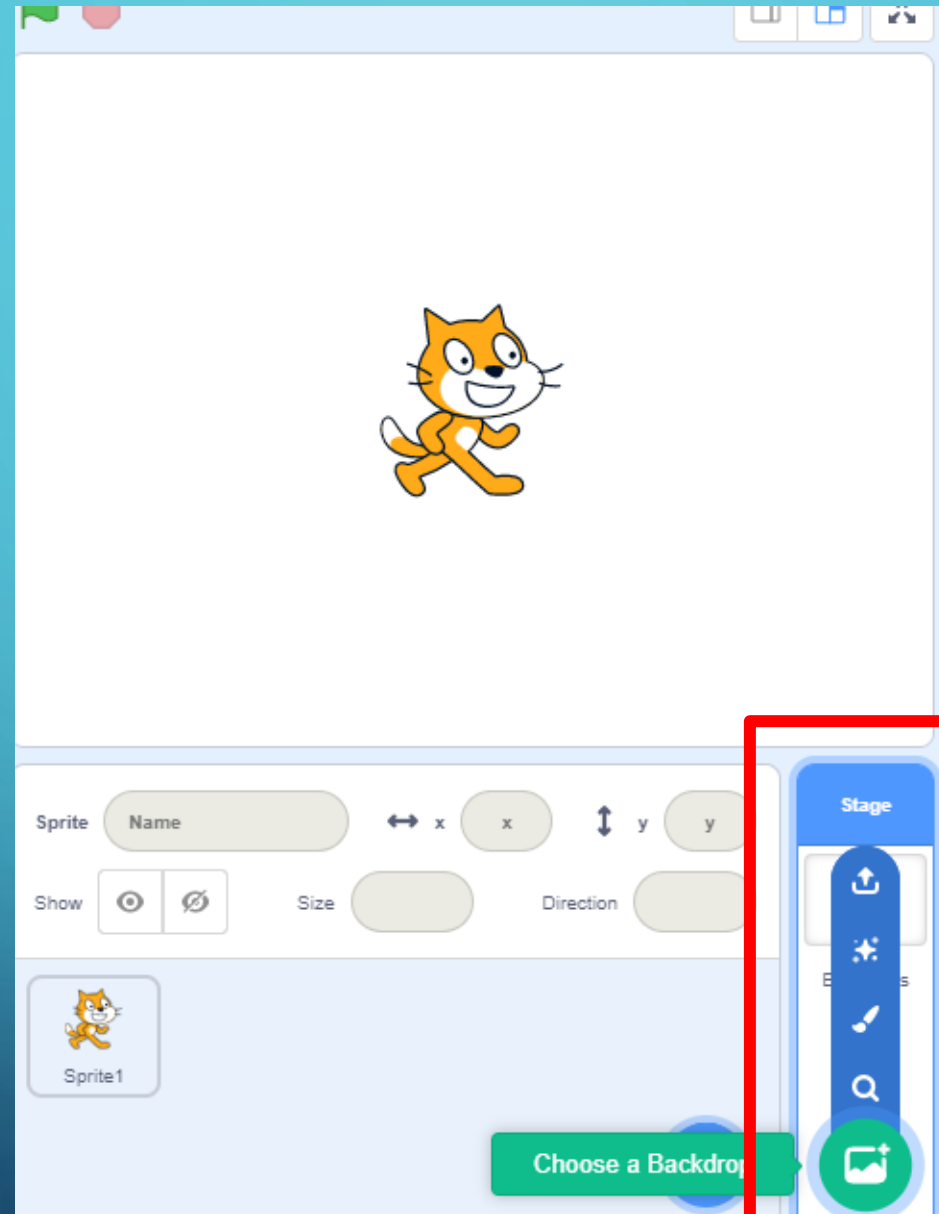
Show   Size  Direction

  
Sprite1

Stage

Backdrops  
1



Choose a Backdrop

Stage

Sprite

Name

x

y

Show

Size

Direction



Sprite1

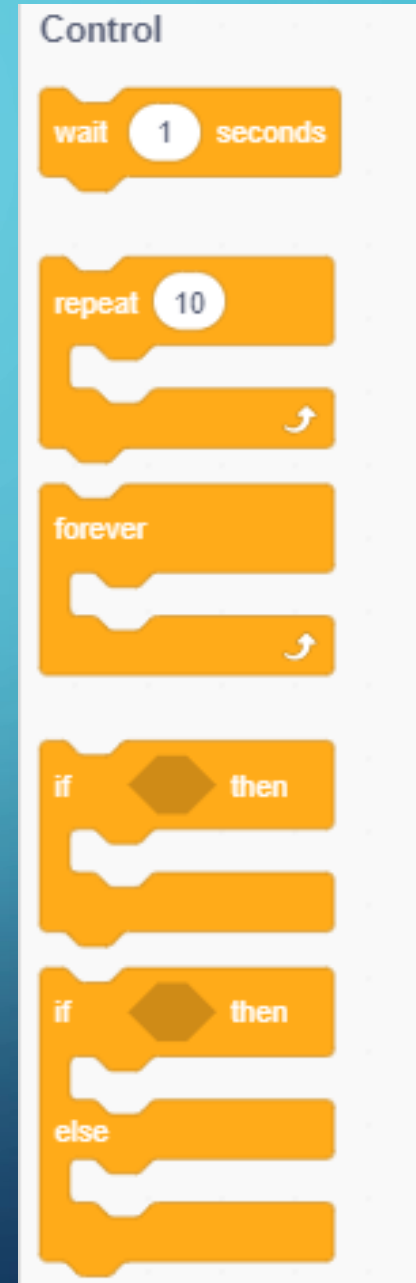




WHAT CATEGORY DO WE USE FOR CONTORLS?

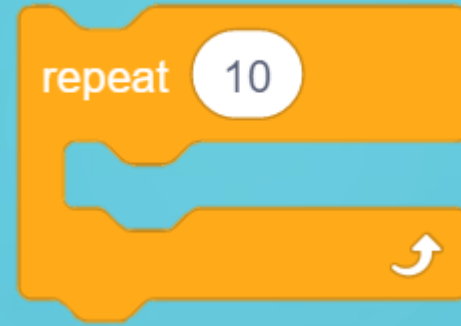
# CONTROL CATEGORY

- Control category has blocks that control scripts
- They are represented by a orange color
- There are 11 control blocks





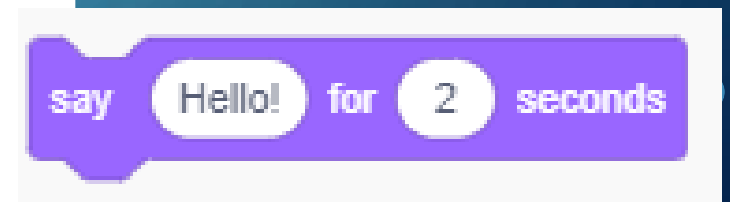
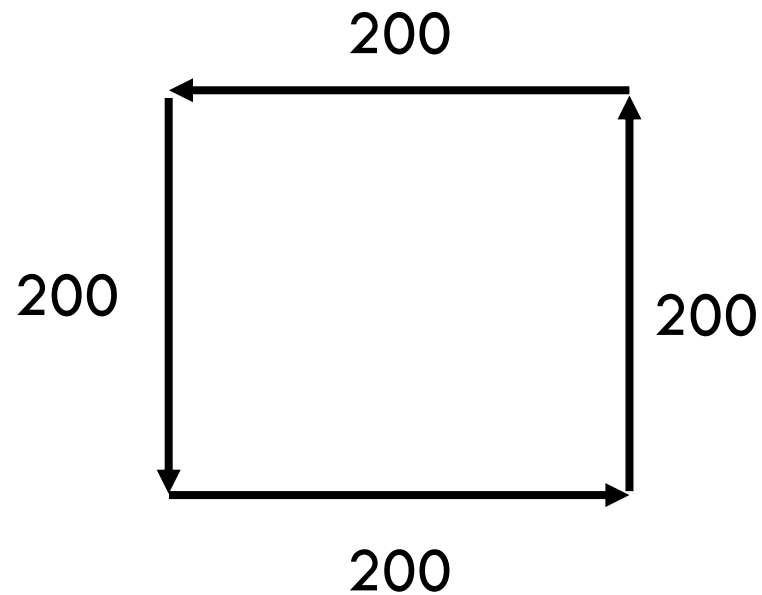
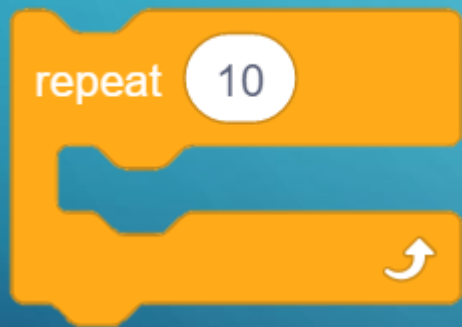
- This block of code is used when we want to pause the code for an n seconds
- The code will wait for the time to pass and then it will continue



- This block of code is used when we want to repeat something for a specific number of times

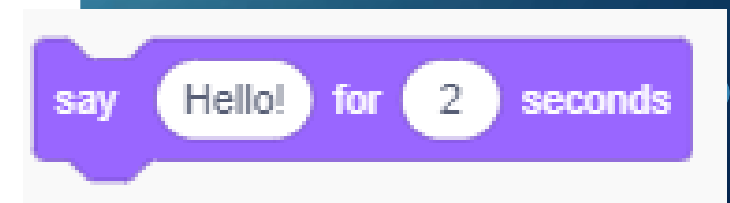
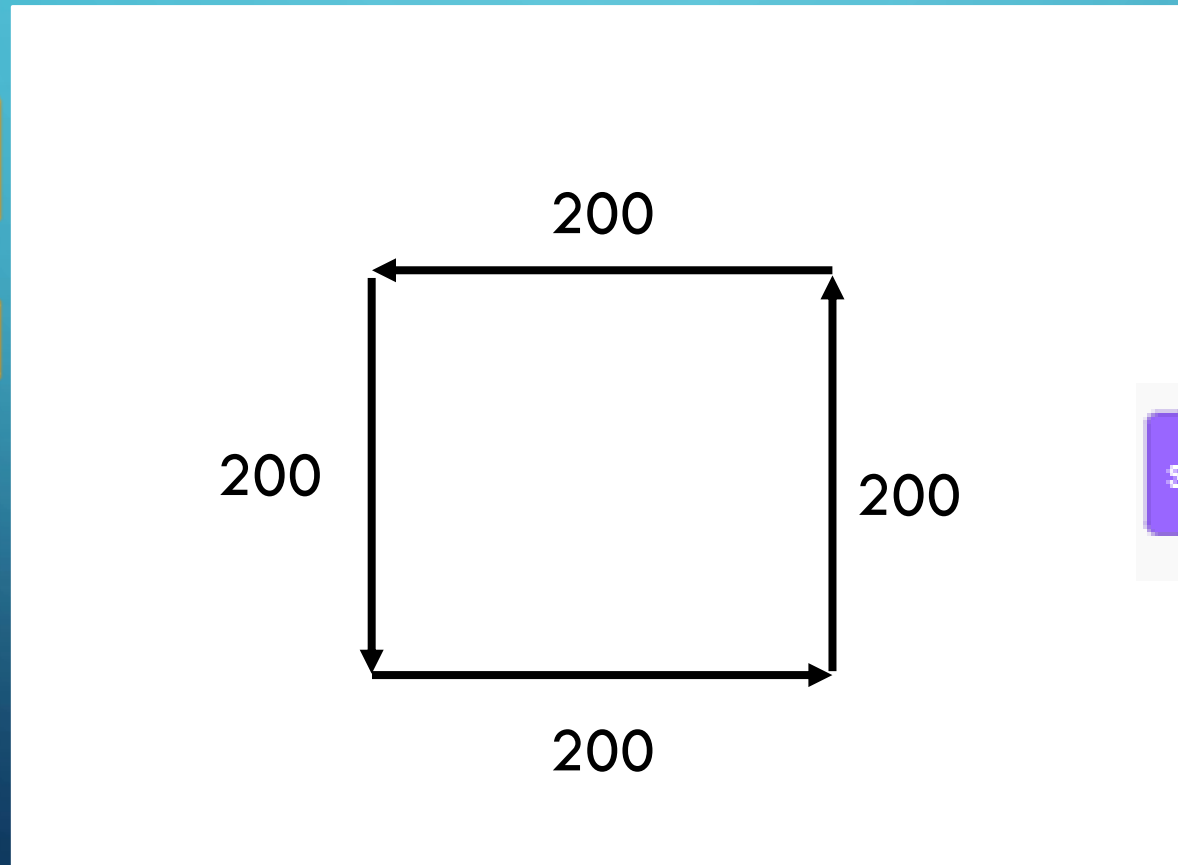
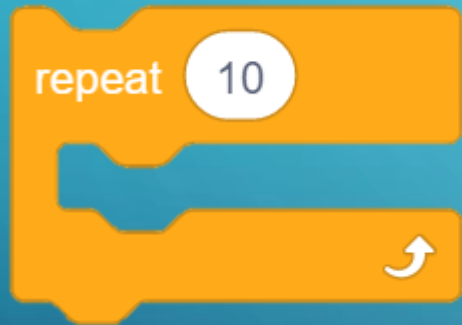
## TASK 2: WALK IN A SQUARE

- Make character move in a square. Every time he moves, change the costume and say "I have moved 200steps" for 2sec. Use repeat 4 times



## TASK 2: WALK IN A SQUARE

- Make character move in a square. Every time he moves, change the costume and say "I have moved 200steps" for 2sec. Use repeat 4 times





```
when green flag clicked
  move 200 steps
  next costume
  say I have moved 200steps for 2 seconds
  turn 90 degrees
  move 200 steps
  next costume
  say I have moved 200steps for 2 seconds
  turn 90 degrees
  move 200 steps
  next costume
  say I have moved 200steps for 2 seconds
  turn 90 degrees
  move 200 steps
  next costume
  say I have moved 200steps for 2 seconds
  turn 90 degrees
```



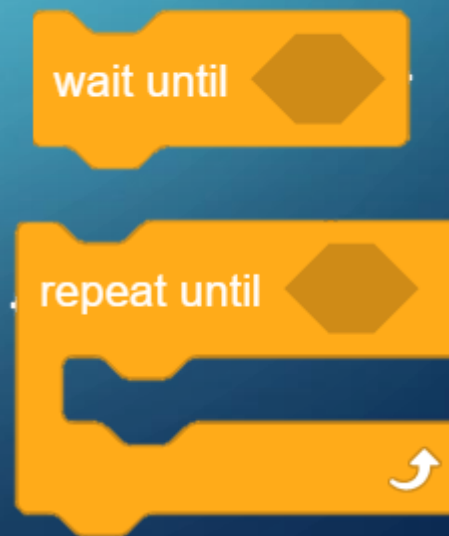
```
when green flag clicked
  repeat 4
    move 200 steps
    next costume
    say I have moved 200 steps for 2 seconds
    turn 90 degrees
```



```
when green flag clicked
  forever
    move 200 steps
    next costume
    say I have moved 200 steps for 2 seconds
    turn 90 degrees
```

# CONDITIONS

- These blocks are used for conditions
- How do they work and what we can do with them we will learn next time



The background is a solid teal color with a subtle gradient. In the four corners, there are decorative white line-art elements resembling circuit traces or neural network connections, with small circles at the end of the lines.

ANY QUESTIONS?



THE END