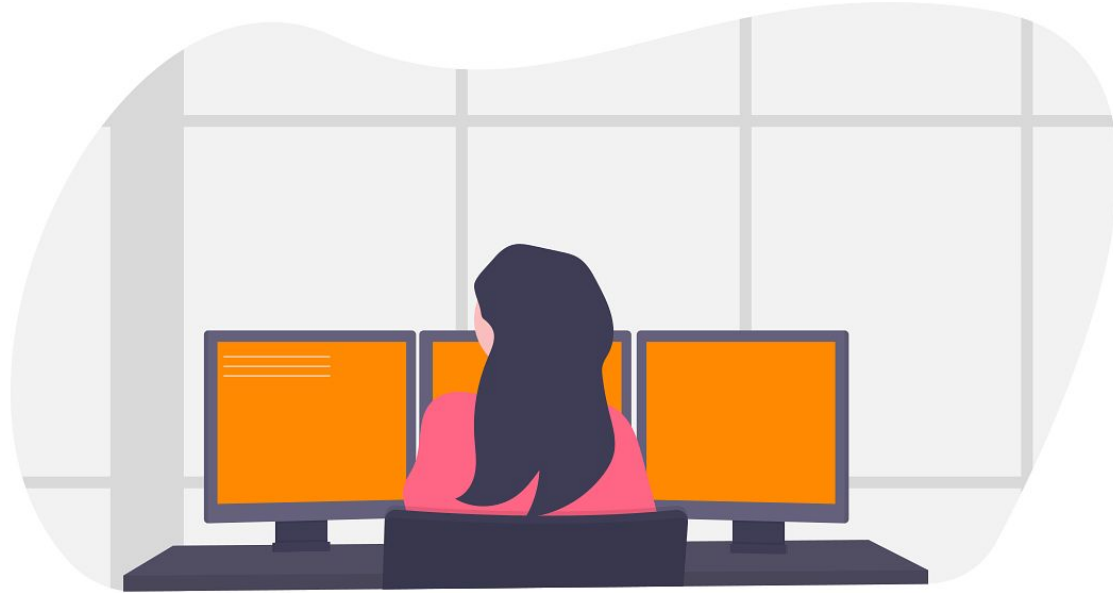


MERITECH GEMEMAKER - DAY 1



WHAT IS CODING?



WHAT IS CODING?





CODING IS ALL AROUND US





AN INTRODUCTION TO SCRATCH

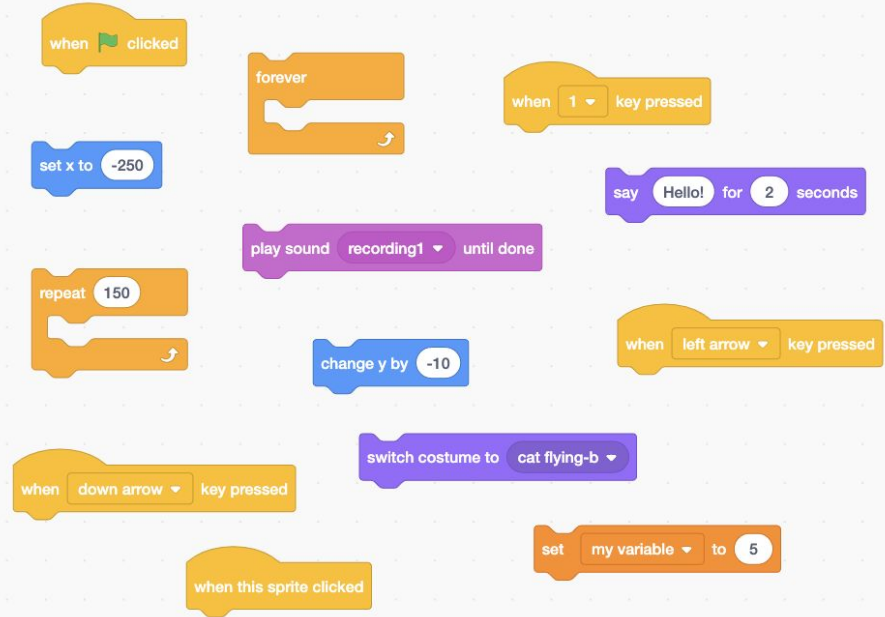
WHAT
IS
SCRATCH?



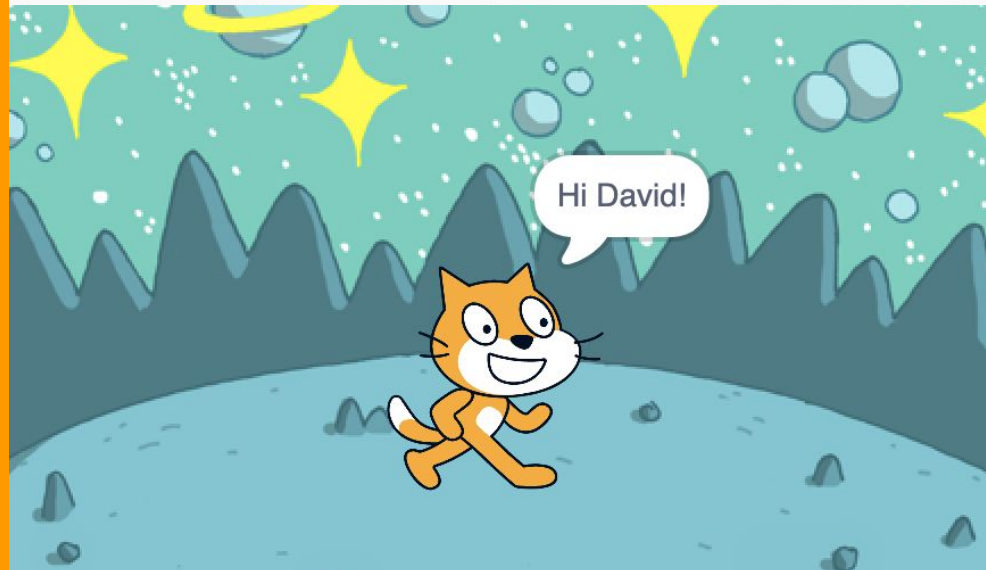
WHAT
IS
SCRATCH?



WHAT IS SCRATCH?



WHAT IS SCRATCH?



WHAT IS SCRATCH?



File

Edit



Tutorials

Code

Costumes

Sounds



Motion

move 10 steps



Looks

turn 15 degrees



Sound

turn 15 degrees



Events

go to random position



Control

go to x: -8 y: -21



Sensing

glide 1 secs to random position



Operators

```
when green flag clicked
  forever loop
    set x to -250
    repeat 150 times
      change x by 3
```

```
when left arrow key pressed
  change x by -10
```

```
when 1 key pressed
  say Hello! for 2 seconds
```

```
when right arrow key pressed
  switch costume to cat flying-a
  change x by 10
```

```
when up arrow key pressed
  switch costume to cat flying-b
  change y by 10
```



```
when down arrow key pressed
```

```
when this sprite clicked
```

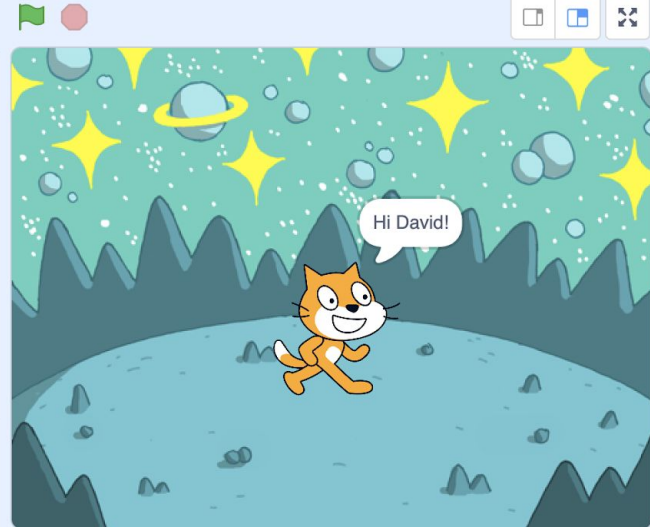
WHAT IS SCRATCH?

The image shows the Scratch programming environment. At the top, the Scratch logo is on the left, and navigation links for "File", "Edit", "Tutorials", "Join Scratch", and "Sign in" are on the right. Below the navigation bar are tabs for "Code", "Costumes", and "Sounds".

The left sidebar contains a "Control" category with various block types: Motion, Looks, Sound, Events, Control, Sensing, Operators, Variables, and My Blocks. The "Control" blocks shown include "wait 1 seconds", "repeat 10", "forever", "if then", "if then else", "wait until", and "repeat until".

The main workspace shows a script for a cat sprite:

```
when green flag clicked
  repeat 24
    turn 15 degrees
  say Hi David!
```



Sprite: Sprite1

x: 4 y: -30

Show:

Size: 100 Direction: 90

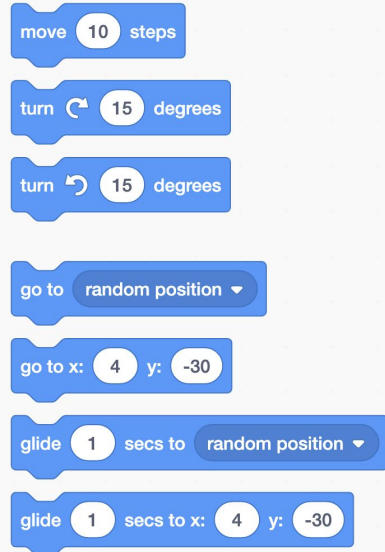
Stage

Backdrops: 2

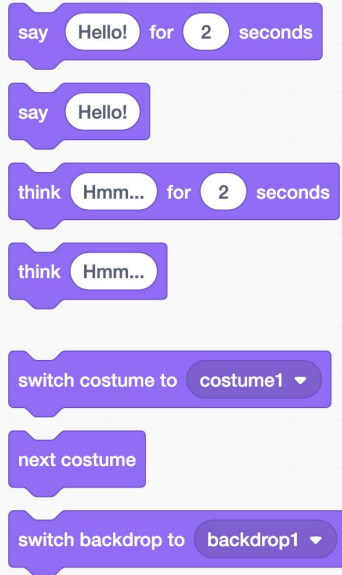
Sprite1

SCRATCH BLOCKS

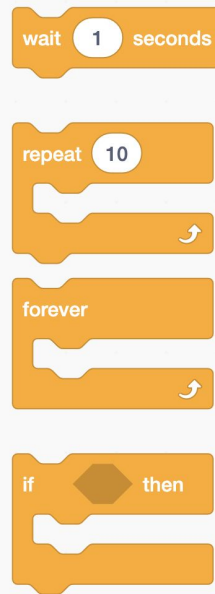
Motion



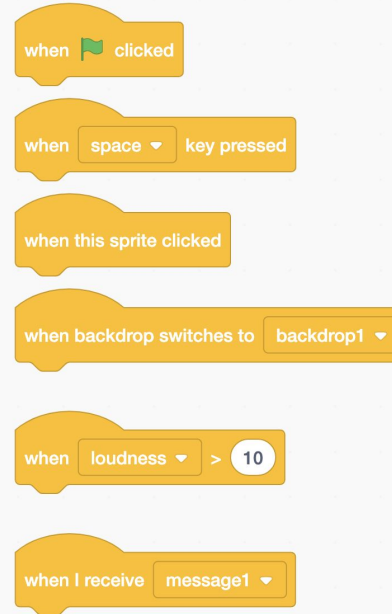
Looks



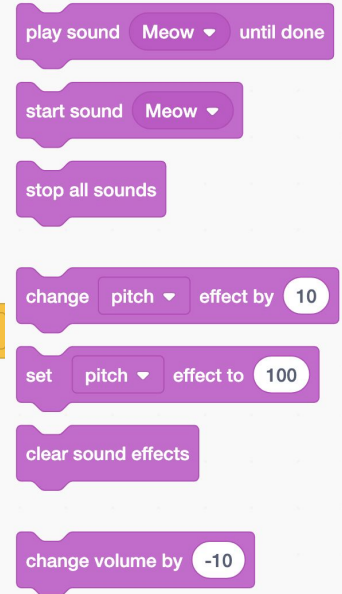
Control



Events



Sound



SCRATCH BLOCKS

Variables

Make a Variable

- Lives
- my variable
- Score

set Lives to 0

change Lives by 1

show variable Lives

hide variable Lives

Sensing

touching mouse-pointer ?

touching color ?

color is touching ?

distance to mouse-pointer

ask What's your name? and wait

answer

key space pressed?

Operators

+

-

*

/

pick random 1 to 10

> 50

< 50

= 50


Blocks | Costumes | Sounds

Motion

- move 10 steps
- go to x: -21 y: 88
- go to random position

Events

- when clicked
- forever



15 MINUTE BREAK

Variables

- turn 15 degrees
- point in direction 90
- point towards mouse-pointer
- change x by 10
- set x to -21
- change y by 10

My Blocks

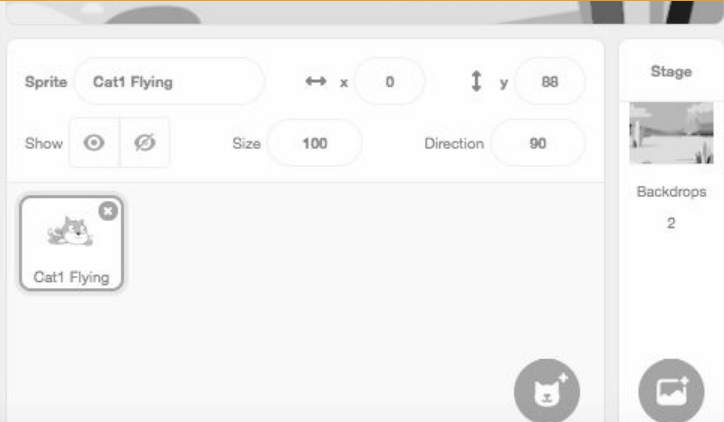
Sprite: Cat1 Flying

Coordinates: x: 0, y: 88

Size: 100, Direction: 90

Stage

Backdrops: 2



Code Costumes Sounds

Variables

Make a Variable

Lives

my variable

Score

set Lives to 0

change Lives by 1

show variable Lives

hide variable Lives

Make a List

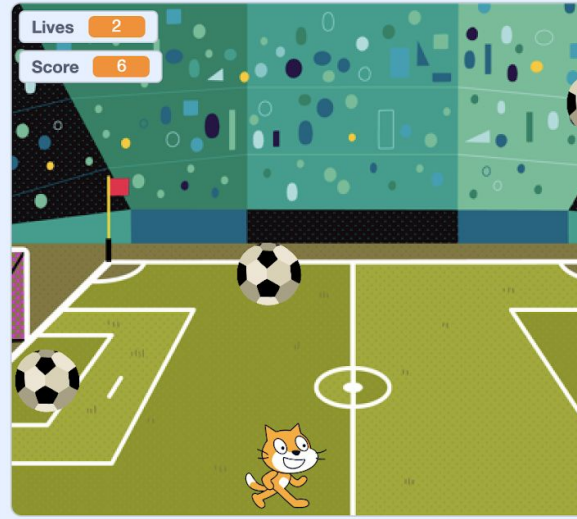
My Blocks

Make a Block

```
when green flag clicked
  forever loop
    if key right arrow pressed? then
      change x by 5
      next costume
    if key left arrow pressed? then
      change x by -5
      next costume
```

Lives 2

Score 6



Sprite Scratchy x: -47 y: -145

Show Size 60 Direction 90

GROUP PROJECT

GROUP PROJECT: OUR FIRST VIDEO GAME!

1. CHOOSE A BACKGROUND
2. ADD OUR FIRST SPRITE (SCRATCHY - OUR MAIN CHARACTER)
3. MAKE SCRATCHY MOVE LEFT AND RIGHT WHEN WE PRESS THE ARROW KEYS
4. ADD OUR SECOND SPRITE (A BALL) AND MAKE IT FALL FROM THE SKY
5. ADD SOME GAME RULES:
 - A. WHEN SCRATCHY AVOIDS THE BALL WE GET A POINT
 - B. WHEN THE BALL HITS SCRATCHY WE LOSE A LIFE
6. CREATE A "GAME OVER" SCREEN
7. PLAY SOME "GAME OVER" MUSIC WHEN WE RUN OUT OF LIVES (BONUS)

THANK YOU!



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