

Score 55



Imagine. Code. Decode.



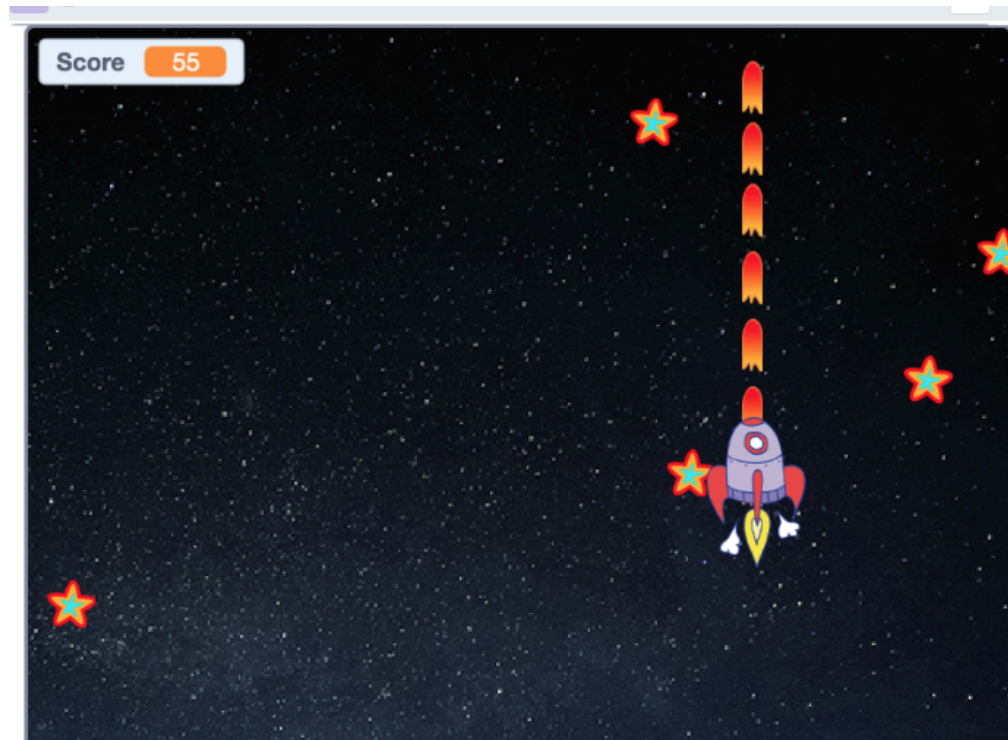
Star Game

arlienly. your possibility



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What will you do to Finish your Final Project - The Star Game?

1. Upload the Blank Star Game project.
2. You are going to Code the Blocks for Each Sprite
3. In the Code Blocks in the following pages there is a yellow box; this is to help you understand the code.

00 Upload the blank star game scratch file

If you do it correctly you will see: You Will have one Backdrop - upload from library

And four Sprites:

1. Rocketship
2. Bullet
3. Star
4. Red Line

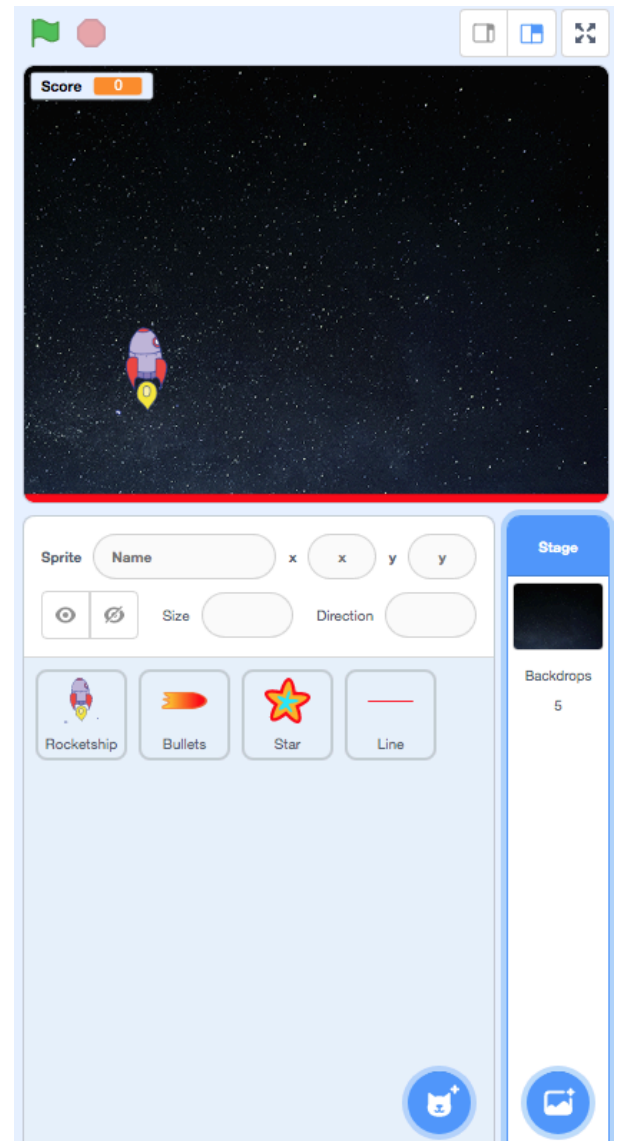
Hack the **Bullet** and **Star** Costumes, Give them your **personal touch**

The Code blocks for **These Sprites** Follows:

Scan 🖱️



And grab the **Blank Star Game project.**



01 The Star Game - Brief

In this game the player has to

- To use the Arrow Keys to cruise the RocketShip
- The Ship continuously shoots every fraction of a second
- The Stars fall from the top
- The player positions the RocketShip in the Stars Line of sight for a score.

/IMAGINE NOW

- Can you make shooting to be controlled by the player, say the **SPACE** key?
- Can you imagine a **YOU-WIN when Score Reaches Some Value?**
You Decide what MAX Value

*For understanding more of the rules of the game, for each code for the backdrops and Sprites there is an explanation **pseudo-code** that looks like this*

– try to understand it!

```
Look .... I need to also  
Behave like a proper rocket  
With blazing Fins, Exhaust and more!  
SO  
FOREVER  
I Change my Costume every 0.1 seconds
```

Google/ Pseudocode - tell us in the class when we meet in class next.

01 Backdrop - code

NO Code for the SPACE Background.

// BUT you can /IMAGINE to do stuffs with it!, like adding shooting stars, whatever you see in the **SKY at Night**

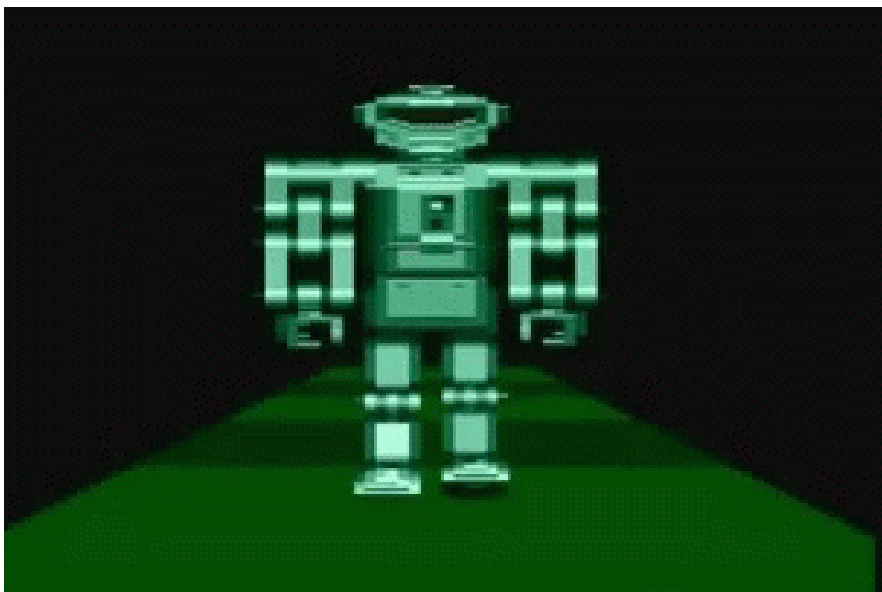
FOR LATER WHEN YOU FINISH THE CODING the SPRITES – \ in our BACKLOG

// So you are SMART, ... you are

this is **a TO-DO** in your Wiz Mind.

Let's Code **The sPriTes First**

Are you **READY** to walk with me **SAYS ArlienTron**



02 RocketShip - Code 1 of 2



Select the **RocketShip Sprite** and Code, but before read the YELLOW Stuff:

Good Tip READ THE YELLOW BOX

```
when clicked
hide
set Score to 0
set size to 40 %
go to x: -139 y: -142
point in direction 90
show
forever
  if key up arrow pressed? then
    change y by 5
  if key down arrow pressed? then
    change y by -5
  if key right arrow pressed? then
    change x by 5
  if key left arrow pressed? then
    change x by -5
```

```
I AM The Rocketship
I AM The main character of the Game

WHEN The Program Starts
I hide myself first while I change My size and position, and point my motion UP wards

Once my position is set and my size is right and I am with Up Costume
I Show myself

THEN I FOREVER
wait and listen for KEP pressed Commands

I listen to Four KEY Commands

When I Sense The Right Key Pressed
I change my position to the RIGHT in STEPS of 5

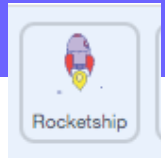
When I Sense The LEFT Key Pressed
I change my position to the LEFT in STEPS of 5

When I Sense The UP Key Pressed
I change my position in UP direction in STEPS of 5

When I Sense The DOWN Key Pressed
I change my position in DOWN in STEPS of 5

MY purpose in this program is perform these commands sent to me by
the player to

- To Shoot my Bullets to the Stars
- WHEN I Shoot A Star my SCORE goes up
```



Still in RocketShip Sprite

Good Tip READ THE YELLOW BOX  This

```
when clicked
  forever
    next costume
    wait 0.1 seconds
```

```
Look .... I need to also
Behave like a proper rocket
With blazing Fins, Exhaust and more!
SO
FOREVER
I Change my Costume every 0.1 seconds
-- so my player thinks I am moving my Fins and spitting Fire at my rear.
```

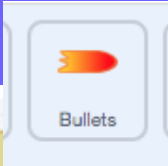
What is a rocket without

Stars and **bullets to shoot them with**

Also remember the **RED LINE** when Stars touch it that makes them DISAPPEAR

Imagine. Code. Decode.

03 Bullet - Code



```
when clicked
hide
set size to 20 %
point in direction 0
go to back layer
forever
  go to Rocketship
```

```
I AM the Bullet
//First things First, I need to Initialise!

WHEN The Game STARTS (GREEN FLAG)
I HIDE - so no one see's when I am changing myself
THEN
  I set my size to a sensible proportion in percentages
  I point my nose upwards that is 0 degree angle
AND FOR FOREVER
  I attach myself to the nose of the RocketShip // go to RocketShip
--
- // at this point I am ready shoot out from the nose of the rocket!

But First I need to duplicate myself 🙌
```

```
forever
  create clone of myself
  wait 0.3 seconds
```

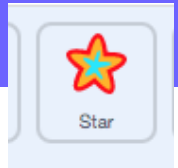
```
I AM The Bullet
// My whole purpose in this block is so

When the Game Starts
FOREVER
  CREATE a clone (double) of myself
  ON fraction of seconds
  To be exact 0.3 second
```

```
when I start as a clone
show
forever
  change y by 3
  if touching Star ? or touching edge ? then
    delete this clone
```

```
//IMAGINE this clone that is created 🙌 above
I AM a CLONE
WHEN I start as a CLONE
I Show myself
and FOREVER
  move UP in STEPS of 3. // in human speak, I am shot up towards the stars
IF I TOUCH a Star or IF I TOUCH the EDGE
  I DIE. // in computer lingo I delete myself 🙌

// my whole purpose as a whole is as a shot bullet that disappears
// when it hits a STAR or the EDGE of this GAME's UNIVERSE.
```



Select the **Star Sprite** and Code the following Scratch Blocks:

The image shows three sets of Scratch code blocks with their corresponding comments in a yellow text area.

Block 1: when clicked

- hide
- set size to 50 %
- forever loop:
 - wait 1 seconds
 - create clone of myself

Comments for Block 1:

```
I AM a STAR
//First things First, I need to Initialise!

WHEN The Game STARTS (GREEN FLAG)
I HIDE - so no one see's when I am changing myself
THEN
  I set my size to a sensible proportion in percentages
AND FOR FOREVER
  I CLONE my self every 1 second

Don't you agree? I think I am A STAR FACTORY!
```

Block 2: when I start as a clone

- show
- go to x: pick random -240 to 240 y: 185
- forever loop:
 - change y by -2
 - if touching Line ? then:
 - delete this clone

Comments for Block 2:

```
WHEN I start as a CLONE STAR
I Show Up
I GOTO some some random X position, between X = -240 and X = 240
AND the top Y position // in SCRATCH top y position is 185

FOREVER
  I MOVE DOWN in STEPS of 2. // in computer lingo I change my Y by -2

  IF I TOUCH the RED LINE // kind of a black-hole
  I Disappear. // in computer lingo I delete myself 😊

// my whole purpose in this block is to be a good STAR that is BORN from some where and dies at
the EDGE of some BLACK-HOLE

-- just a thought 😊
```

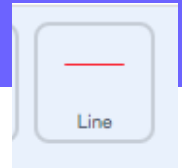
Block 3: when I start as a clone

- forever loop:
 - if touching Bullets ? then:
 - change Score by 1
 - delete this clone

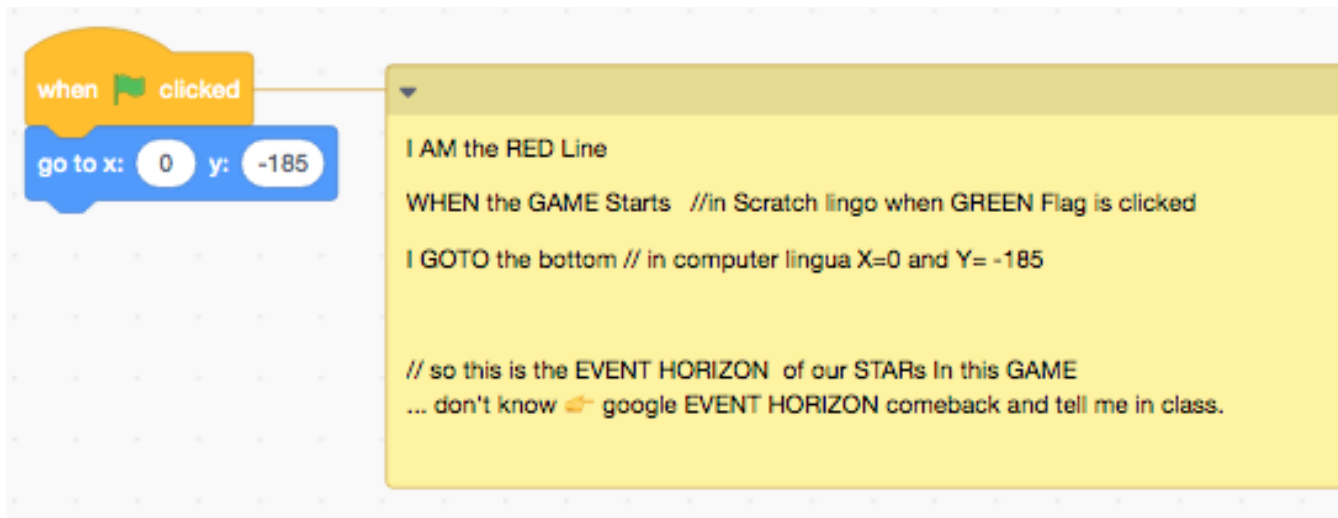
Comments for Block 3:

```
ALSO
WHEN I start as a CLONE STAR
FOREVER
  IF I TOUCH a bullet
    I DECLARE I SCORED A POINT // in computer lingo I change the score by 1
    I DIE. // in computer lingo I delete myself 😊

// my whole purpose in this block is to be a good bullet OBSERVER that
// KEEPS tally of STARS Shot.
```



Select the **Red Line Sprite** and Code the following Scratch Blocks:

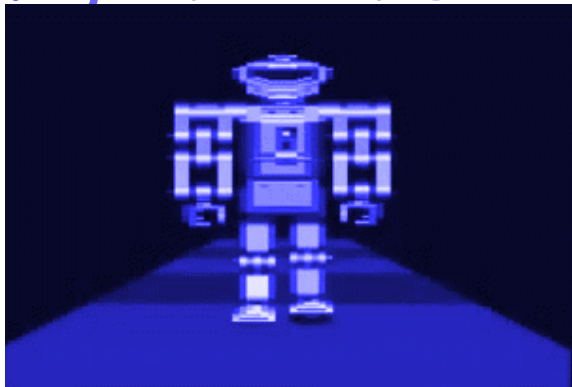


That's it!

Arliener you are a **Quick Learner**

You are well on the way of becoming a
Coding Champ!

Imagine. Code. Decode.



Good Tip ALWAYS READ THE YELLOW BOXes, YOU WILL **THANK ME**
WHEN YOU GROW AND ROCK THE WORLD WITH YOUR BRILLIANCE!

yours / arlienTron.