





FIRST TILEMAPS TASK



Description.

In this project, we will work on a game that uses various programming and video game concepts, such as handling sprites, using tilemaps, and interacting with elements generated by the tilemap. Additionally, we will explore the use of loops that repeat based on the elements on the screen.

In order to do that, we use <u>MakeCode Arcade</u> to create the game.

Goals.

- Create a "Protagonist" Sprite that we can control its movement.
- Draw a map with different elements that function in different ways.
- Set up walls within the scenario.
- Develop interactions between sprites and elements of the scenario.







Programming guide.





DIGIM 🛱 RKEŢ SPR@JECT 🛈





We create the player character and place it on the player's starting tile. Since there is only one starting tile, its position will not be random but on the tile we have placed.

We will make the camera follow the player because the scenario is larger than the screen.

We will program the protagonist so that we can move it using the directional buttons.

on start	
set tilemap to tilemap	
set mainCharacter 🔹 to sprite	of kind Player 🔻
place mainCharacter - on top of random	
camera follow sprite mainCharacter ▼	
move mainCharacter 🔹 with buttons 📀	

COINS POSITIONING CREATION

Continuing the programming in the "on start" block, we will use a "for element value of list" loop, which will repeat as many times as the size of the list. From the Scene tab, we will use the "array of all [] locations" block, which will fetch the locations of each tile we specify. We replace "list" with this block. This way, "value" will have the value of each tile's location.

Inside the loop, we will create food sprites (representing coins) and position them at the location indicated by "value".

Outside the loop, we will add a countdown timer to add tension to the game.

If we use the "destroy food" block, the game will not work correctly because it will interpret that the last "Food" sprite created is the one that should disappear.









PLAYER AND TILES INTERACTION	
We will place the instruction that will activate the programming when the player touches the specified tile. Within this, we will include the action of losing the game.	on sprite of kind Player overlaps over at location game over LOSE
Let's remove the interaction between the player and the tile, but now let's use it to win the game if the score is equal to 3. If the player fails to collect all 3 coins, he will not be able to finish the game.	on sprite of kind Player overlaps overlaps over at location if score = over with game over with
COIN AND PLAYER INTERACTION	
As a final set of blocks, we will program the interaction between the player sprite and the coin sprite. We will make the coin sprite that is being touched to be destroyed. It is important to drag the "otherSprite" block into the "destroy" block. We will also increase the score by one.	on sprite of kind Player overlaps otherSprite of kind Food destroy otherSprite change score by 1

With this programming, we will use the "Player" sprite to navigate through a maze, collecting all the coins, and then reaching the goal while avoiding traps.