FIRST SPRITES TASK

Description.

In this project we create a basic game where we have to pick up food in order to get points. We work concepts such as creation of sprites, movement or appearance and interaction between sprites.

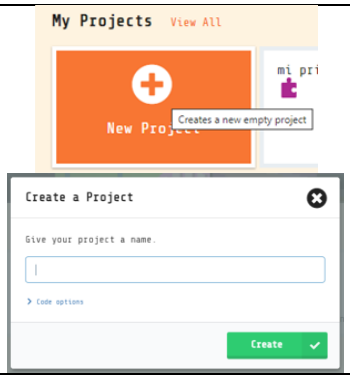
In order to do that, we use MakeCode Arcade to create the game.

Goals.

- Create a sprite of a kind “Player” whose movement can be controlled.
- Generate a sprite of a kind “Food” that allow us to increase our score.
- Programming the interaction between sprites.
- Establish a duration time for the game.

Programming guide.

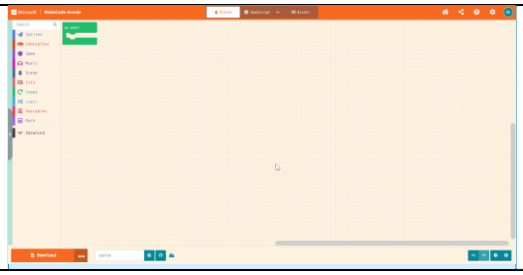
NEW PROJECT

We start creating a project, we should stablish the name, for example ¨Picking up food¨ and then press ¨create¨ button.	

ASSETS CREATION

Sprite Player Creation

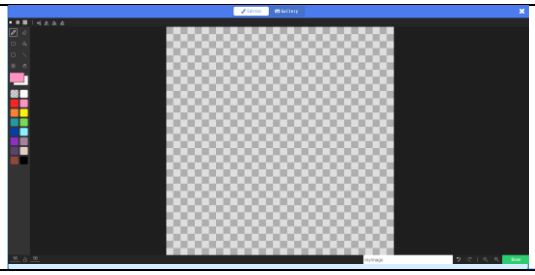
We create one sprite with 16 x 16 px dimensions. We create in ¨Assets¨ and then we look for a sprite that we like in ¨Gallery¨. After that we click on ¨Done¨



[1] **megjegyzést írt:** Esto es un gif y no se ve bien fuera de la aplicación de escritorio.

FOOD SPRITE CREATION

We repeat the same process but with the food.



[2] **megjegyzést írt:** Esto es un gif y no se ve fuera de la aplicación de escritorio

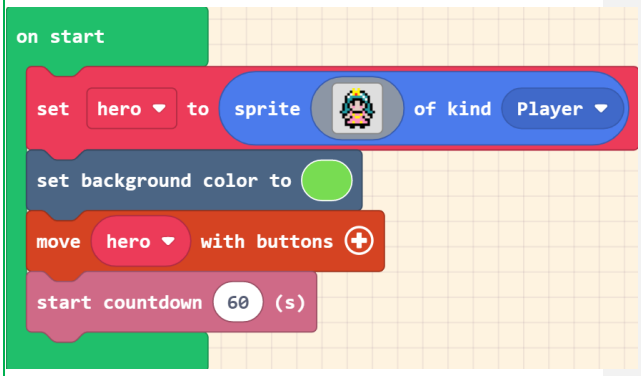
MAIN PROGRAMMING

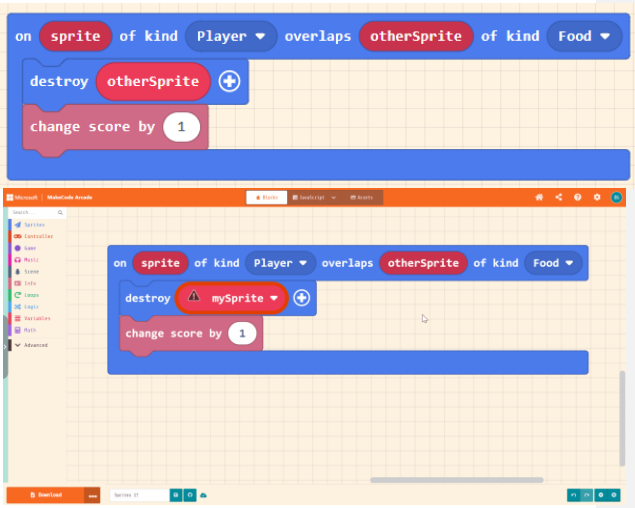
ON START GAME CREATION

We start the programming with the character we will control, we can create our own design or choose one from the gallery. To generate the character, we have to start creating a new variable with the following name ¨hero¨, we link this variable with the picture of the sprite.

Besides, we set a backgrounc to rekindle the scenery and we give movement to our character with the crosstree of the simulator.

Lastly, we use start countdown in order to end the game.



APPEARANCE FOOD MECHANIC	
We program a loop which creates sprites every 1 second of kind "Food" they will interact with sprites later. Before generating the sprites, it is necessary to define the donut variable so we can create its design. We set a random position to our "Food" sprite so they can appear anywhere.	
PICKING UP FOOD MECHANIC	
With the "overlaps" block something will happen when a sprite of a kind touches other of a different one. In our case, if a sprite of a kind "Player" touches other of kind "Fooc", the last one will disappear, and our score will increase. To get this interaction, we are going to drag the "other sprite" block from the "overlaps" and we are going to put it in the "destroy" block to delete the sprite which is being touched by the kind "Player" sprite. Also, our score will increase one point. If we put "destroy fooc" the game will not work correctly, because it will interpret that the last "Food" sprite created is the one that must disappear.	

With this programming we are going to use the sprite of kind "Player" to obtain points by touching the kind "Food" sprite while these are appearing all over the scene with a one-minute timer.

Glossary

Sprite: It is a graphic element designed in a bit map. We can apply different attributes such as position, velocity, acceleration...

Bit map: It is a pixel grid we use to design sprites.

Scene: Space where the videogame takes place.

Player: Contestant of the game.

Randomness: Generation of numbers with the same probability of appearance.

Score: Points that the player gets when doing certain interactions.

Count down: Time that we set, something will happen when it runs out.