

Game Maker

Chapter 2 Lesson

Game Maker is a great environment for learning to program a game with minimal effort. We will use predesigned images and pre-recorded sounds to create a game. Let's get started!

Getting Started

As you begin any programming project you must understand the problem you are solving. Please don't under estimate this portion of the process. It is critical that you analyze the parts of the problem. Here are the design considerations you should consider for Evil Clutches...

Understand the Problem

Determine the images (called sprites in Game Maker) that will be used in the game:

- Mother Dragon (user controlled with up and down arrows)
- Evil Boss (automatically moves up and down)
- Demons (released by the Evil Boss and attack the Mother Dragon)
- Babies (released by the Evil Boss and saved by the Mother Dragon)
- Fireball (the dragon throws at the Demons using the space bar)
- Point system (Gain points for shooting Demons and saving the Babies, while losing point for shooting the Babies)
- End of Game (Demons collide with the Mother Dragon, High Score Table appears)

This type of analysis will help you as you construct the game.

Resources

Game Maker has **resources** that you can place into a game. The most common **resources** are *sprites*, *sounds*, and *backgrounds*. In our first game the resources are:

Sprites: Dragon, Evil Boss, Demons, Baby, Fireball

Sounds: General Background music, Fireball hits Demon

Background: General Background Image (Cave)

Define Your Objects

A *sprite* will not come to life until it is assigned to an *object*. **Objects are defined by adding events and actions that characterize how the object will behave.** For instance, a user can control the vertical motion of the Mother Dragon by pressing the Up or Down arrows. The *action* associated with the Up arrow is to move the Mother Dragon up. The *action* associated with the Down arrow is to move the Mother Dragon down. If a Space Bar is hit the Mother Dragon will shoot a fireball toward an on-coming demon.

The general steps to add the mother dragon are:

- 1) *create* and name the *object* (i.e. object_Dragon)
- 2) *assign* a *sprite* to an *objects* (assign sprite_Dragon to object_Dragon)
- 2) associate an *event* with an object (create a Keypress Event for the Up Arrow and associate it with the object_Dragon)
- 3) associate an *action* with the new event (add a Move Fixed action and define it to move up)

Let's add another event. You will need an event to create the Evil Boss and start it in an upward motion.

- 1) create and name the *object* (object_boss)
- 2) assign sprite_Boss to object_boss
- 3) create a new *event* called Create
- 4) associate a Move Fixed *action* and set the motion to up.

So, how do we get the Evil Boss to move up and down. Another event! In this case the event is called *Intersect Boundary* and the action is called *Reverse Direction*.

Please follow the directions in the book! Later you will have a chance to experiment with the settings.

Rooms

The game does not come to life until you add a room and places some instances of the objects you have created into the room. There is a fine difference between an object and an instance. You may have multiple instances of any object and each instance behaves as is defined in the object. You add an instance displaying the object and clicking a position in the room where the instance should be positioned.

Save Your Project

It is easy to save your project. Just give the project a name.gmk (gmk is the file extension associated with Game Maker).

Testing Your Project

You test your project by clicking the *Run The Game* icon (green triangle found in the tool bar). Don't be surprised if you missed a step. It will likely require you to do some debugging (fixing errors).