Directions for creating the Evil Clutches game-
Directions from the Game Maker's Apprentice book by Jacob Habgood and Mark Overmars

Game Description
      You play a mother dragon who must rescue her hatchlings from an unpleasant band of demons that have kidnapped them. The band's boss sends a stream of demons to destroy the dragon as the hatchlings make their escape. The mother can fend off the boss's minions by shooting fireballs, but must be careful not to accidentally shoot the hatchlings!
      The arrow keys will move the dragon up and down and the spacebar will shoot fireballs. The player will gain points for shooting demons and rescuing young dragons, but will lose points for any hatchlings that accidentally get shot. The game is over if the dragon is hit by a demon, and a high-score table will be displayed.

Creating a new sprite resource for the game:
1. From the **Resources** menu, choose **Create Sprite**. The Sprite properties form appears.
2. Click the **Name** field—it says sprite0. This is by default. Name the new sprite_dragon.
3. Click, the **Load Sprite** button.
4. Select the required image from the file requester. The correct image is Dragon_strip6.png in the Resources/Chapter02 folder on the network/
5. Click OK to close the form. Your sprite is now created.

Create remaining sprites for the game:
1. From the **Resources** menu, choose **Create Sprite**. The Sprite properties form appears.
2. Click the **Name** field. Name the new sprite_boss.
3. Click, the **Load Sprite** button. Choose Boss_strip4.png
4. You need to create a demon sprite, baby sprite and fireball sprite using Demon_strip4.png, Baby_strip2.png, and Fireball.png. Give your sprites an appropriate name and each name starting with the word sprite. Use only letters and the underscore symbol.

Creating a new object and assigning it a sprite:
1. From the **Resources** menu, choose **Create Object**. The object properties form opens.
2. In the **Name** field, give the object the name object_boss.
3. Click the icon at the end of the sprite field and select the sprite _boss.

Adding a create event for the boss object:
1. Click the **Add** event button.
2. Click the **Create** event to add to the list of events.
3. Next, you need to include the **Move Fixed** action. To do this, click and hold the mouse and drag it to the empty Actions box. An action form will then open.
4. Select the up arrow and enter a value of 8 for Speed. This makes the object move vertically 8 pixels for every step it takes.
5. Press **OK** to close the action form.

Add an intersect boundary event for the boss object:
1. Click the **Add** event button
2. Click **Other** from Event Selector and select **Intersect boundary**.

3. Include the **Reverse Vertical** action in the list of actions.
4. Nothing needs to be changed so click **OK**.

Creating the Dragon object:
1. From the **Resources** menu, choose **Create Object**.
2. Name the object_dragon.
3. Select the sprite_dragon from the drop down menu.

Adding keyboard event for the dragon object:
1. Click the **Add** Event button.
2. Choose a **Keyboard event** and select **<up>** from pop up menu.
3. Include a **Move Fixed** action in the Action list.
4. In the action form, select **UP** and set **Speed** at 16.
5. Repeat the process to add a **Keyboard** event for **<down>** key that includes a **Move Fixed** with **downward** direction and **speed** of 16.

Adding a no key event for the dragon object:
1. Click the **Add** Event button.
2. Chose a **Keyboard** even and select **<no key>** from the pop-up.
3. Include the **Move Fixed** action.
4. Select the **center** square and set **Speed** to 0.
5. Click **OK** to close the Object Properties form for the dragon object.

Creating a new room resource:
1. Select **Create Room** for the Resources menu.
2. Click the **settings** tab in the top left of the form.
3. Enter a name for the room. Call it room_first.
4. Enter a caption. Type in **Evil Clutches**. This will show up in the title bar of the window.

Adding a dragon and boss to the room:
1. Click the **objects** tab in the top left of the form. The dragon object is already selected.
2. Click on the **room** grid with the left mouse button. An instance of the dragon will be placed in the top left corner of where you click. This is where the dragon will start at the beginning of the game so put on dragon close to the left boundary of the room. If you don't like where it came in, right click the dragon to remove it.
3. Click on the dragon's image on the objects tab and select the boss from the menu
4. Place an instance of the boss close to the right edge of the room but make sure the whole boss is completely in the room. Otherwise, the events assigned to the boss will not work properly.

Saving your work and running the game:
1. Choose **Save** from the File menu
2. The first time you save, you will be asked where to save and what to call it. Name the game **EvilClutches1.gmk** and save it to your U: drive.
3. To run the game, select **Run Normally** from the Run menu. You should be able to move the dragon up and down using the arrow keys and the boss moves up and down by itself.

4. To run the game in full screen mode, click the **F4** button. To restore the window, click F4 again.

Creating the fireball object:
1. Select **Create** object from the Resources menu.
2. Call the object_fireball.
3. Select the fireball sprite.

Adding the fireball object's events:
1. Click the **Add** Event button and choose **Create**.
2. Include the **Move Fixed** action in the Actions list. Click on the right arrow and set the Speed to 32.
3. Click the **Add** Event button again, select **Other** and pick **Outside room**.
4. Select **Main 1** tab and include a **Destroy Instance** action in the Actions list. Click **OK**
5. Click **OK** to close the fireball object properties form.

To make the dragon shoot fireballs:
Creating a Key Press event for the dragon object:
1. Double-click the dragon object to open the Object Properties form.
2. Click the **Add** Event button. Select **Key** press even and choose **<Space>** from the pop up menu.
3. Select the **Main 1** Action tab and include the **Create Instance** action.
4. In the action form, we need to specify the type of instance and where is should be on the screen. Select the fireball object, enter 100 in X and 10 in Y and select **Relative** checkbox.
5. Click **OK** to close action form and **OK** to close the Object Properties form.

Creating the demon object:
1. Create a new object_demon and assign using the demon sprite.
2. Add a **Create** event and include the **Moved Fixed** action.
3. Select **all** 3 **left pointing direction arrows** and set **Speed** to 12. This will make the movement random.
4. Add an **Intersect Boundary** event (from the Other events) and include the **Reverse Vertical** action.
5. Add an **Outside** room event (also in Other) and include a **Destroy Instance** action.

Demons will now bounce back and forth between the top and bottom of the screen. Next we create collision events that will destroy objects and give scores.

Adding an event to the demon object for colliding with the fireball:
1. Click the **Add** Event button, choose the **Collision** event, and select the fireball object.
2. Include a **Destroy instance** action from the **Main1** tab.
3. Also include a **Set Score** action for the score tab. This should appear below the Destroy Instance in the Actions list
4. Enter a value of 100 in the **Set Score** action for and click **Relative**. This will make the score add 100 to the current score.

If the demon and dragon collide, the game is over. At that point, we want the high score table to appear for the player to add their name. Then we want to be able to restart the game.

Adding an event to the demon object for colliding with the dragon:
1. Click the **Collision Event** for colliding with the dragon object.
2. Include the **Show High Score** action from the score tab.
3. Click **OK** to keep the default settings.
4. Also include a **Restart Game** action from **Main 2** tab.
5. Click **OK** to close.

Now we are going to make the game randomize when the demons will appear.
Adding a step event to the boss object:
1. **Double click** the **boss** to open its Properties form.
2. Click the **Add** Event, select **Step** and choose **Step** again from the pop up menu.
3. Include a **Test Chance** from the Control tab. Set the sides of the die to 50 in the properties.
4. Also include a **Create Instance** in the Actions list. Set the properties to create a demon object and select **Relative** so the demon is created relative to the boss's position.
5. Click **OK**, **save** and **run** the game to test it. Demons should be appearing and you should be able to shoot fireballs to build up your score. At the end of the game, a high-score table should be displayed.

Now we are going to add to the challenge by adding a baby dragon along with demons. If a baby dragon is shot, you lose 300 points but if you rescue one, you earn 500 points.
Creating a new baby dragon object and its events:
1. Create a new object called object_baby and assign using the baby dragon sprite.
2. Add a **Create** event to the object and include a **Move Fixed** action. Set to move left with a **Speed** of 8.
3. Add an **Outside** room event (in Other) and include a **Destroy Instance** action from Main 1 tab.
4. Add a **Collision** event with the fireball object and include a **Destroy Instance** action as well.
5. Include a **Set Score** action in the collision event with a value of -300 and **Relative** selected.
6. Add a **Collision** event with the dragon object and include a **Destroy Instance** to it.
7. Include a **Set Score** action with a value of 500 and **Relative** selected.
8. Click **OK** to close the properties form.

Now we need to make the boss randomly release baby dragons and demons. Baby dragons will appear less often than demons.
Editing the boss object to create baby dragons:
1. **Reopen** the Object Properties for the **boss** object.
2. **Click** on the **existing Step** event to open it.
3. Include another **Test Chance** action in the Step event. **Set** the die to 100.
4. Include a **Create Instance** action below the new Test Chance. **Set** the properties to create a baby object and select **Relative**.
5. **Save your work as Evilclutches2.gmk.**

Now we need to make the rooms look interesting with a background and add sounds to the game with music and sound effects. We will start with the background. The images need to be the same size as the game window 640x480 pixels.

Creating a new background resource and assigning it to the room:
1. Select **Create Background** from the **Resources** menu.
2. Name the background_cave and click the **Load Background** button. Select the background.png from the Resources folder.
3. Click **OK** to close the properties form.
4. **Reopen** the **properties** form for the room by double clicking it.
5. Select the **backgrounds** tab. Click the menu icon to the right of no background and **choose** the **cave** background.
6. **Close** the properties form by clicking on the green checkmark on the top left corner of the form.

Creating a music resource and playing it in the boss object:
1. Select **Create Sound** from the **Resources** menu and call it sound_music.
2. In the properties form, click **Load Sound** and select music.mp3.
3. Close the **Sound** properties form by clicking **OK**.
4. **Reopen Boss** Object properties form.
5. Click the existing **Create** event and view its actions.
6. Include a **Play Sound** action (**main1**) in the Create event.
7. In the properties, **select** the **music** sound and set **Loop** to **TRUE**.
8. Click **OK** to close action and **OK** to close boss object.

Sound effects add enhancements to games. We will add two effects, one for shooting a demon and one for shooting a baby dragon.

Creating and playing sound effects for shooting baby dragons and demons:
1. **Create** a **new sound** resource called sound_demon.
2. **Load** the Demon.wav file.
3. **Close** the sound properties form.
4. **Reopen** object properties for the **demon** and **select** the existing **Collision** event **with** the **fireball object**.
5. Include the **Play sound** action and **select** the **new sound**. Leave the **Loop** to **FALSE**.
6. **Close** the **action** form **and demon** property form.
7. **Repeat** the previous steps **for the baby.wav sound**. Include an action to play it when the **baby dragon collides with the fireball**.
8. **SAVE your work as Evilclutches3.gmk**
9. **Run the game** ☺