

Inside GameMaker Programming...

Lesson 18: Create a Deck of Cards

Essential Questions

- What types of loops are possible?
- How are they set up?

Overview

This is the second game in a series of small card games where each one builds on new concepts until we finish with a larger card game.

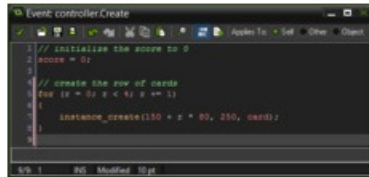
This game is a simple solitaire game. We will lay a series of cards out onto the playing area. The player turns them over in an attempt to place all the cards before finding the four Kings.

Code Background

For Loop

Before building and shuffling the deck of cards we will look at some programming concepts that we will need in order to build the game. We will start with a For Loop.

Create event - add to the end.



```
// initialize the score to 0
score = 0;

// create the row of cards
for (i = 0; i < 4; i += 1)
{
    instance_create(150 + x * 50, 250, card);
}
```

Save and play to see what it does.



Four cards were created in the playing area. The repeated code is contained inside the for block (inside of the { and }) and in this case is nothing more than the instance_create() function. This loop executed four times:

Description

Working On:

Project Name: Deal a Deck

- Building the complex card sprites
- Building a deck of cards
- Shuffling the cards using random numbers

Lesson Specific College and Career Readiness Standards addressed for your state can be found [here](#).

Notes/Lesson Plan

There will be less step-by-step instructions for this project for concepts that were used throughout the Ball Bouncer project. New concepts will still be presented step-by-step.

Assignments

Lesson 18 For Loop Practice

Activity

Add Assignment

Downloads

[DealADeckResources.zip](#)

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Lesson 18 For Loop Practice

Description

Can you determine the program output of code using loops and arrays?

Instructor Note

This activity asks students to do code walk-throughs and determine output. A class discussion following the activity will help students deepen their understanding of loops, array, and code tracing.

Question 1:

The first for loop in the code below fills the second column of the card array. List in order the values that are stored in the array.

```
score_hand = 0;
for (i = 0; i < 3; i += 1)
{
    card[i,1] = i * 2;
}

for (i = 0; i < 3; i += 1)
{
    score_hand += card[i,1];
}
show_debug_message(score_hand);
```

Question 2:

What is the error in the following piece of code?

```
for (i = 0; i < 4; i += 1)
{
    suits(i) = i * 10;
}
```

Question 3:

What will display in the messages window when the following code runs?

```
odd = 0;
for (num = 1; num < 6; num += 2)
{
    odd = odd + num;
}
show_debug_message(odd);
```