



Novel Games

**Bouncing Balls Flash Game
Customization Guide**

Version 1.0



Novel Games

Web Site: <http://www.novelgames.com>

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Modification History

<i>Version</i>	<i>Date</i>	<i>Description</i>
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Introduction

This document describes the source codes of Bouncing Balls game and the ways to customize the game.

In order to use the source code your computer should have Flash Professional 8 or above installed. You should also have basic knowledge of the Flash authoring environment, such as the steps to change a picture and the steps to change the value of a variable, etc.



Directory Structure

The source codes are arranged in the following directory structure:

```
+
+-- bouncing.pdf (this file)
+-- common
|   +-- com
|       +-- novelgames
|           +-- flashgames
|               +-- common
|                   +-- MainDevelopment.as
+-- bouncing
    +-- bouncing fla
    +-- bouncing.swf
    +-- bouncing.htm
    +-- com
        +-- novelgames
            +-- flashgames
                +-- bouncing
                    +-- Config.as
                    +-- other ActionScript .as files
```

To build the game, you should open bouncing\bouncing fla in Flash 8 and then publish it. The file bouncing.swf in the same directory is the compiled swf file for your reference.

The file bouncing.htm contains sample HTML codes for you to use in your web site.

All the ActionScripts are arranged in class files put in the bouncing\com\novelgames\flashgames\bouncing folder.



Depending on what you'd like to customize, you will need to modify different files:

- 1) If you want to change the graphics and the sounds, then you should edit the fla file.
- 2) If you want to tune some parameters of the game, then you should edit the Config.as file.
- 3) If you want to add the support of high scores, the credits page, or the volume control buttons, then you should edit the MainDevelopment.as file.
- 4) If you want to change the behaviour of the game and such changes cannot be achieved by tuning the game parameters as in 2) above, then you should edit the ActionScript .as files.

We will discuss 2) and 3) in the next two sections.



The Configuraton File (Config.as)

In this section we'll explain the parameters in Config.as and how they affect the behaviour of the game.

Parameter	Description
BALL_SIZE	The diameter of the balls, in pixels
BALL_HITSIZE	The hittable diameter of the balls, in pixels
BALL_DIMENSIONX	The horizontal dimension of the balls
BALL_INITIALROWS	The initial number of rows shown when a level starts
BALL_COLOURS	The colours of the balls, in 0xRRGGBB format
BALL_SHOOTY	The y coordinate (in pixels) of the shooting position of the balls
BALL_SHOOTMINANGLE	The minimum angle of the shooting balls
BALL_SHOOTMAXANGLE	The maximum angle of the shooting balls
BALL_SHOOTSPEED	The shooting speed (in pixels per second) of the balls
BALL_DROPACCELERATION	The acceleration (in pixels per second squared) of the dropping balls
BALL_GAMEOVERSPEED	The speed (in pixels per second) of the balls when the game is over
GROUPSIZE	The number of balls of the same colour to be connected in order that they be destroyed
EXPLODE_DEGREES	The number of degrees the explosions will rotate
EXPLODE_TIME	The number of milliseconds the explosions will be shown for
STAR_APPEARTIME	The number of milliseconds the stars will be shown for
STAR_APPEARINTERVAL	The number of milliseconds between the appearance of two adjacent stars
LEVEL_INITIALROWS	The initial total number of rows in a level
LEVEL_ROWSINCREASE	The increase in the total number of rows for each level
LEVEL_INITIALTYPES	The initial in the number of ball types in a level



LEVEL_TYPESINCREASE	The increase in the number of ball types for each level
LEVEL_INITIALMOVESPEED	The initial move speed of the balls, in pixels per second
LEVEL_MOVESPEEDINCREASE	The increase in the move speed of the balls (in pixels per second) for each level
MESSAGE_LEVELTIME	The number of milliseconds the level text will be shown for
MESSAGE_WINTIME	The number of milliseconds the win text will be shown for
MESSAGE_GAMEOVERTIME	The number of milliseconds the game over text will be shown for
SCORE_GROUP	The score awarded for destroying a group of balls
SCORE_EXTRABALL	The extra score awarded for each extra ball destroyed in a group
SCORE_DROP	The score awarded for each ball dropped
SCORE_STAR	The score awarded for each star when a level is won
TIPS_URL	The URL of the web page containing the tips for playing this game



Optional Functions (MainDevelopment.as)

If you want to support high scores then you'll need to modify the following 2 functions in this file:

```
public function showHighScores():Void {  
    trace("showHighScores()");  
}  
  
public function showEnterHighScore(score:Number):Void {  
    trace("showEnterHighScore(" + score + ")");  
}
```

The `showHighScores` function will be called if the high scores button is clicked.

The `showEnterHighScores` function will be called when the game has finished and the score of the user has been calculated.