Color Game

# Introduction

The game board consists of a 4x4 grid, all in all 16 slots. All slots consist of cards face-down. The player is to flip two of these upwards each round, trying to find equals. If the two cards are equal, the player receives one point, and the cards are removed from the game board. Otherwise, the player loses one point and the cards are turned face-down again. This continues until all pairs have been found.

# Technical Details

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| Technology | .Net Framework 4.5 |
| Front-end | Silverlight 5 |
| Back-end | WCF, C# |
| Database | MySql |
| Supported Browser | Google Chrome & IE 9 (Recommended), Firefox 3.x+, Safari. |
| Tested Browser | Google Chrome, IE 9 |

# Design Overview

The Color Game application follows ‘n-tier’ architecture. Application is divided into 3 different layers i.e.

1. Front end- This layer is built in Silverlight. This layer consumes operation contracts provided by Score service.
2. Service layer- This layer is Score service, it gives the contracts to work with Score server. This services can be consumed by any front end like Silverlight, Asp.Net MVC, and PHP etc. Hence, making it extensible.
3. Data layer – This layer handles the database transactions.

*Diagram*

Service Layer

User Score

High scores

My Sql (database)

Score server (Data layer)

Color Game (Silverlight)

# Instructions to Setup

This heading explains the necessary steps & the prerequisites for the *Color Game*. Steps given below are with respect to Windows 7 or 8 operating system.

## Prerequisites:

* .Net framework 4.5
* Silverlight 5.0.
* Database: - MySql & MySql database management studio v.5+. However, Application will still run if database is not available it will show dummy results.
* IIS 7.5: - For hosting WCF service and Silverlight application.
* VS 2012 or VS 2013 is required to build or debug the source code.

## Setup MySql:

* Open My Sql workbench studio or any other My Sql Management Studio and Run “**SqlScript.sql**”. *Note:* ***Color Game*** *app will still work without having* ***MySql*** *database. At the end of the game, user will be provided with a choice to use database. MySql can be downloaded and installed by visiting* [*http://www.mysql.com/*](http://www.mysql.com/) *.*

## Host WCF service:

* Open IIS manager. It can be opened by pressing “windows + R” key or by typing “inetmgr” in windows start search and then entering “inetmgr” command.
* Right click on “Default Web Site” and select “Add Application”.
* Set alias name as “Service”.
* Set physical path to “(downloaded directory)\memory-game\Source\code\GameService.Wcf”. Downloaded directory refers to the location on computer where source code is downloaded & extracted.
* Set the App pool as “Default App Pool” with v 4.0. This is by default. In case if it is on v 2.0 it can be set to v 4.0 from Application Pools page.
* Hit Save.

## Host Color Game:

* Host Release folder in IIS.
* Open IIS manager. It can be opened by pressing “windows + R” key or by typing “inetmgr” in windows start search and then entering “inetmgr” command.
* Right click on “Default Web Site” and select “Add Application”.
* Set alias name as “ColorGame”.
* Set physical path to “(downloaded directory)\memory-game\Source\code\ColorGame.SL.Web”. Downloaded directory refers to the location on computer where source code is downloaded & extracted.
* Set the App pool as “Default App Pool” with v 4.0. This is by default. In case if it is on v 2.0 it can be set to v 4.0 from Application Pools page.
* Hit Save.
* Enjoy the game by entering this URL “localhost/ColorGame/ColorGame.SLTestPage.aspx” in your web browser.