TRAILHEAD

TECHNOLOGY PARTNERS

.NET and C# Training

Session 7

Overall Agenda

~~Session 1 – 6:~~	~~Basic and Advanced C# and VS~~
Session 7:	**Classes available in .NET BCL**
Session 8:	Data Access Basics (ADO.NET)
Session 9 - 10:	C# Advanced concepts
Session 11 – 12:	Data Access with Entity Framework 6
Session 13 – 14:	Version Control with TFVC and Git
Session 15 – 16:	ASP.NET (RESTful) Web APIS

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Today's Agenda

1. Review last assignment (1 hr)
2. Review useful classes in the BCL (2 hr 45 min)
3. New assignment (15 min)

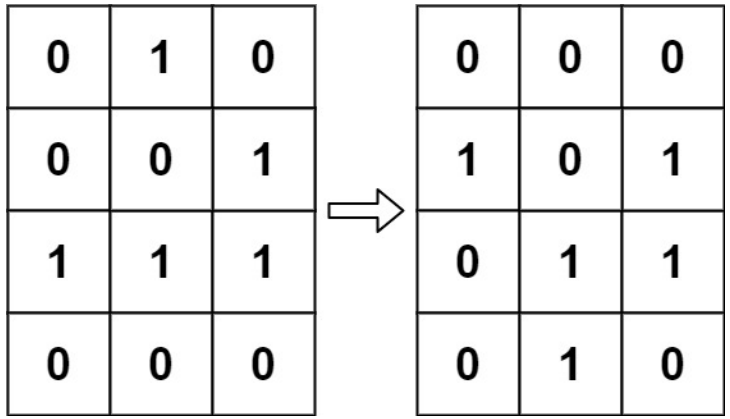
Review Last Assignment

Assignment 6

- Implement the famous “Conway’s game of life” as a C# console application
- Choose a board size 80x25 or smaller
- Rules:
  1. Any live cell with fewer than two live neighbors dies as if caused by under-population.
  2. Any live cell with two or three live neighbors lives on to the next generation.
  3. Any live cell with more than three live neighbors dies, as if by over-population.
  4. Any dead cell with exactly three live neighbors becomes a live cell, as if by reproduction.

Challenge: Allow different pre-defined starting condition from a file (or random)

Example



https://github.com/jonathantower/learning-dotnet

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BCL Classes

Demo

System.IO

Demo

Convert

Demo

Encoding

Demo

Regular Expressions

Demo

Streams, StreamReaders, StreamWriters

Demo

Uri

Demo

WebClient vs. HttpClient vs. HttpWebRequest

Demo

DateTime, TimeSpan, DateTimeOffset

Demo

JSON.NET (not in the BCL)

Assignment 7

- Write a ***useful*** console app that gets its data from a web API
- To get you started, check out this free API listing: https://github.com/public-apis/public-apis

Challenge: Cache the API results locally in the filesystem and use those local results instead of calling the API if they are fresh enough.

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