

Week 1 Immersion

Technologies	Concepts	Instruction
.NET Architectural Components	Repo : Repository	git init
.NET Core	Entity Framework : SQL – Structured Query Language	git add
.NET Standard	DB – Database	git commit
.NET Framework	ORM – Object Relational Mapping	git branch
.NET Runtime	HTML: HyperText MarkUp Language	git remote
ASP.NET Core : Active Server Pages	CSS: Cascading Style Sheets	git push
UWP : Universal Windows Platform	JS: JavaScript	git pull
Mono	SDLC: Software Development Life Cycle	git clone
Xamarin	DevOps: Development Operations	..
Docker	SDK : Software Development Kit	..
Azure Cloud	API: Application Programming Interface	ls
Apis	SOAP: Simple Object Access Protocol	cd
TypeScript	REST: Representational State Transfer	rm
Angular	XML: Extended Markup Language	mkdir
gitBash	JSON: JavaScript Object Notation	touch
DotNet	microservices	/c/
VIM	orchestration	
Nano	Kubernetes	
NuGet	Source Code	
xUnit	IL: Intermediate Language	
	Virtual Machine	
	CLI: Common Language Infrastructure	
	IDE: Integrated Development Environment	
	OOP: Object Oriented Programming'	
	CLR: Common Language Runtime	
	CIL: Common Intermediate Language	
	MSIL: MicroSoft Intermediate Language	
	Compiler (Roslyn C#)	
	Machine Code Native Instructions	
	Absolute Path	
	Relative Path	
	VCS: Version Control System	
	SCM: Source Code Management	
	Interfaces	
	Exception Handling with TryCatchFinallyThrow	
	Struct: User-Defined Structures	
	Polymorphism – 4 Pillars of OOP	
	Inheritance – 4 Pillars of OOP	

Encapsulation – 4 Pillars of OOP
Abstraction – 4 Pillars of OOP
Abstract Class
Access Modifiers (Public, Private, Protected, Internal, Protected Internal, Private Protected)
Parameter Modifiers (Out, Params, In, Ref)
Other Modifiers: (Abstract, Const, ReadOnly, Static, Virtual)
Single Responsibility Principle (Solid)
Open Close Principle (Solid)
Liskov Substitution Principle (Solid)
Interface Segregation Principle (Solid)
Dependency Inversion Principle (Solid)
Co-Variance & Contra-Variance
MVC: Model, View, Controller & UE: User Experience with UA: User Application
Casting
Type Conversion
Serialization
File I/O: Input/Output
Logging
TDD: Test Driven Development
Method Hiding
Overloading
Overriding
Class
Instantiation
Objects
Members
Accessibility
Local Variables
Methods – Static & Instance
Class – Value & Reference Parameters
Static
Void
Null
Boolean
Numbers – Int, Float, Decimal
String & string.empty
Class – Type Parameters
Class – Base Classes
DVCS (Distributed VCS)
CVCS (Centralized Version Control System)
Namespaces

Project, Build Assembly, Solution
Casting – Up & Down
Garbage Collector
Stack
Heap
Queue
Code Blocks
Instruction
Using
Primitive DataTypes
Reference Type
Enumerators
CLS: Common Language Specification
CTS: Common Type System
JIT: Just In-Time Compiler
VES: Virtual Execution System
Semantic Code – Comments
Type Conversion
Implicit Conversion
TypeOf
Usage Errors, Program Errors, System Failures
Custom Exceptions, User-Defined Exceptions
Collections (Array, List, Linked List, Map)
Adjacent Memory for Collections (Array, List)
Pointer Memory for Collections [{List (Linked), Dictionary – Map (Key/Value Pair) }
Runtime – Breakpoints



Resource	Tasks	Reference Manuals
Slack.com	gitBash Exercise in Slack	VIM https://www.openvim.com/
VS Code	C# Hello World in Revature Pro	VIM https://vimhelp.org/
Visual Studio 2019	GitHub Repository	gitBash https://www.educative.io/blog/bash-shell-command-cheat-sheet
gitBash	HackerRank https://www.hackerrank.com/2102netnickweek1	gitBash http://kgarofali.github.io/Pre-MAP//docs/UnixHandout.pdf
GitHub.com	C# Reading of Particular Topics in Slack	DotNet https://docs.microsoft.com/en-us/dotnet/core/introduction
HackerRank.com	C# Rock, Paper, Scissors	C# https://docs.microsoft.com/en-us/dotnet/csharp/tutorials/intro-to-csharp/local-environment
Discord.com	Unit Testing Reading in Slack	C# https://docs.microsoft.com/en-us/dotnet/csharp/tour-of-csharp/
	C# RoundTable xUnit Testing	Git https://learngitbranching.js.org/
		Git https://stackoverflow.com/questions/1274057/how-to-make-git-forget-about-a-file
		VCS https://guides.github.com/introduction/git-handbook/
		C# https://docs.microsoft.com/en-us/dotnet/csharp/properties
		C# https://docs.microsoft.com/en-us/dotnet/csharp/programming-guide/concepts/compilation
		C# https://www.youtube.com/watch?v=q1nQILMqAXA
		.NET https://docs.microsoft.com/en-us/dotnet/core/testing/
		.NET https://docs.microsoft.com/en-us/dotnet/core/testing/unit-testing-with-dotnet-test
		.NET https://xunit.net/
		.NET https://xunit.net/docs/getting-started/netfx/visual-studio
		C# https://stackoverflow.com/questions/614818/in-c-what-is-the-difference-between
		C# https://docs.microsoft.com/en-us/dotnet/core/testing/unit-testing-best-practices
		C# https://www.youtube.com/watch?v=ub3P8c87cwk
		TDD https://deviq.com/practices/test-driven-development
		C# https://docs.microsoft.com/en-us/dotnet/csharp/programming-guide/concepts/compilation

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