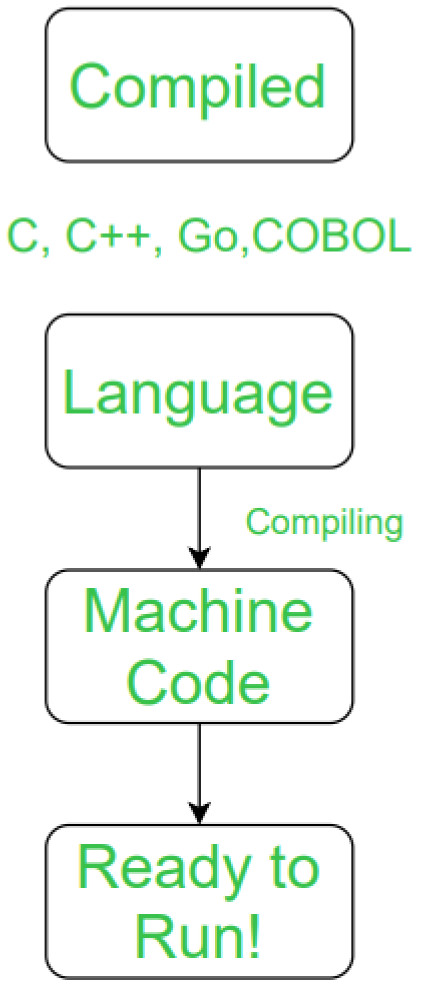
Verify people have everything setup

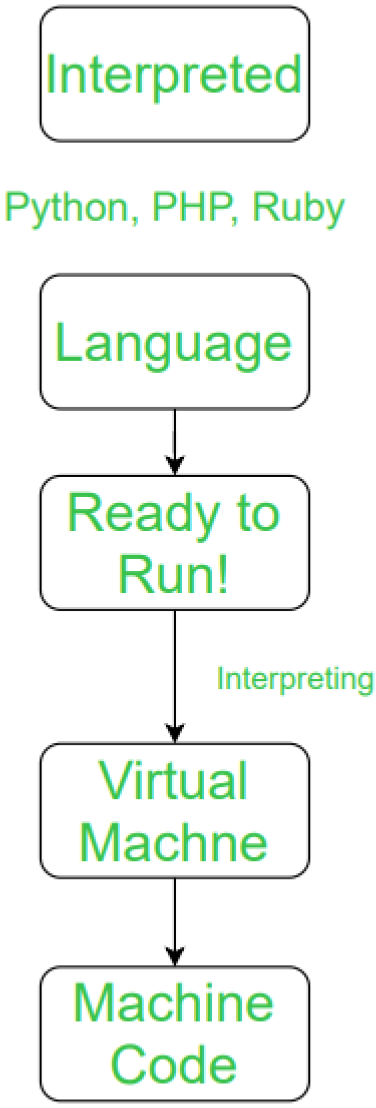
1. Visual Studio Code
2. c# extensions
3. dontnet sdks and runtime
   `dotnet --list-sdks`
   `dotnet --list-runtimes`
4. Git bash https://git-scm.com/downloads
5. Change vscode to use gitbash `ctrl + `` ` ``
   `ctrl + shift + p` `select gitbash`
6. Open new folder in vscode
7. Instal Roslynator via vs code extension
8. Show themes

Boring Lecture Part

- What is .dotnet
  - a framework designed by microsoft
  - crossplatform
  - built in libraries
  - General purpose langauge
  - statically typed
    - In a statically typed language, data types are defined during compile time and cannot change during runtime
  - compiled


Compiled
C, C++, Go,COBOL
Language
Compiling
Machine Code
Ready to Run!

- ▪
- interpted



    -
    - source https://www.geeksforgeeks.org/difference-between-compiled-and-interpreted-language/
  - What can you build using .dotnet
    - Console app - terminal apps
    - Web Apps
      - we will learn blazor
    - Desktop Apps
    - Video Games
  - DotNet Documentation
    - https://learn.microsoft.com/en-us/dotnet/

Programming

1. create first program

   ```
   mkdir HelloWorld
   cd HelloWorld
   dotnet new console
   ```

This uses dotnet templates there are many. Can find list on google or by using the command line tool `dotnet new list` https://learn.microsoft.com/en-us/dotnet/core/tools/dotnet-new-sdk-templates

2. Create first program using explicits

```
mkdir HelloWorldExplicit
cd HelloWorldExplicit
dotnet new console --use main-program
```

```
namespace HelloDotNetExplicit;

class Program
{
    static void Main(string[] args)
    {
        Console.WriteLine("Hello, World!");
    }
}
```

    - Namespace - name of project
    - internal - access modifier
    - class - wrap content with curly braceout
    - program class
    - void - doesn't return a value
    - Console is a method

3. Program Arguments

```
mkdir ProgramArgsExplicit
cd ProgramArgsExplicit
dotnet new console --use main-program
```

    - you can pass in arguments into a function like so

```
    namespace ProgramArmsExplicit
    {
        internal class Program
        {
            static void Main(string[] args)
            {
                Console.WriteLine(args[0]);
            }
        }
}
```

   - `dotnet run jake` in your console
   - output should look like this

```
Jacob Baggs@DESKTOP-BBD74IS MINGW64
~/Documents/LearnCSharp/lesson1/ProgramArmsExplicit
$ dotnet run jake
jake
```

   - Program Arms nonexplicit

```
mkdir ProgramArgs
cd ProgramArgs
dotnet new console
```

```
Console.WriteLine(args[0]);
```

```
Jacob Baggs@DESKTOP-BBD74IS MINGW64
~/Documents/LearnCSharp/lesson1/ProgramArgs
$ dotnet run jake
jake
```

4. CheatSheet