Metrics

1) The runtime for the BASH script was .345 seconds and for C# it was .281 seconds

2) BASH had 54 lines while C# had 78

3) BASH took 1.7 kb while C# .sln file took 1.1

4}

-C# easier to read and learn

-C# OOP

-C# allows for more used control

-C# can allow the user to manage memory in unsafe mode

-BASH is best suited for programmers with some experience

-BASH readability takes time to get used to

-BASH has less user control

-C is not user friendly and difficult to learn because of memory management

-C is a gernal purpose language

5)

-BASH does not need additional software like a compiler

-BASH can run on any terminal(not powershell or cmd)

-C# Requires DOTNET framework

-C# Best with an IDE like Visual Studio

-C requires the gcc compiler

-C can run on any device as an executeable

Overall Take away

Although BASH, C#, and C are programming languages, they are very different. For one, BASH is an interprative language as opposed to a compiled on like C and C#. This means that BASH will be slower than C and C# in projects that are larger at scale, but for small scale programs it should be fine as a scripting tool. C is faster and smaller than C# because it is closer to hardware. With the trade off of being lower level, it is harder to use and takes more time for the programmer to finish their program. This means that using either of the two is conditional on what the programmer wants to accomplish. For example, C# would be great for creating a video game, while C would be best for creating the operating system for smart glasses. BASH would best be used for running a script that scrapes through multiple output files of a network to find server outages. Each of these languages serve a seperate role. Rather than comparing and being stuck on one saying "This is the best language" use the language as a tool for a specific problem, rather than using screw driver to hammer a nail.