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CSC344 Programming Languages

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### **Assignment: Programming Languages I might like to learn more about**

**Abstract:** The goal of this assignment is to share six programming languages that I have an interest in learning. Programming languages serve as the mediums so that we humans can communicate with computer systems. So throughout the assignment I will research the various programming languages origins and how they came to be, how they tend to be used today, and how it holds up to today's standards. This will hopefully provide a better grasp of these languages to my peers and perhaps motivate them to look more into them as well.

## **1. C – 1972**

C is a general-purpose high-level language that was developed in 1972 by an American Computer Scientist, Dennis Ritchie, in Bell laboratories. It is the successor to the language B, which was also developed by Dennis Ritchie in Bell laboratories. C was originally designed as a system programming language capable of writing an operating system. C started to gain popularity in the 1980's and has since become one of the most used programming languages.

### **Why learn C:**

1. C has a low-level access memory and a very clean style making it great for different types of system programming like operating systems or compiler development.
2. C is a very versatile language as it is platform independent and works well on many different types of operating systems which means learning this language would not constrain you.
3. C is one of the basis/core of most modern languages today so learning it would help improve understanding of how things work in other languages.

## **2. SQL – 1974**

SQL stands for structured query language and was developed at IBM by Donald D. Chamberlain and Raymond F Royce. It was initially developed by these two after they learned about the relation model from Edgar F. Codd but it would be officially released in 1974. SQL is used for stream processing data that is held in relational database systems. it excels at handling structured data and creating relations among them.

## **Why SQL:**

1. SQL is in high demand in many industries as developers, business analytics, data science and more use SQL daily to find trends in their specific industry.
2. As stated before, SQL excels at handling large structured data so it is efficient at performing various operations within large databases.
3. SQL Is updated often with new technology which makes it user friendly and highly portable when working on sort of data or data driven tech.

## **3. Python – 1990**

Python is another high-level general purpose programming language. It was developed in the late 1980s by Guido Van Rossum at Centrum Wiskunde & Informatica in the Netherlands. It is the successor of the ABC programming language and python's key points lie in its garbage collection and how its readability.

### **Why Python**

1. Python is efficient, reliable, and much faster than most modern high level languages and can be used in almost any kind of environment. This versatility gives makes it an extremely valuable language to learn as it is used in most web developments, apps and more.
2. Python is also another portable language; I don't know if you can see the trend but I love portable languages as they don't constrain me to one operating system.
3. Python is great at the automation of many tasks, as a programmer you can reach crazy levels of automation with some experimentation.

## **4. Ruby – 1995**

Ruby was created by Yukihiro Matsumoto, a computer scientist and software programmer in the year 1993. Ruby was influenced by Perl and Python as Matsumoto describes the design of Ruby to be more like Lisp at its core.

### **Why Ruby**

1. Ruby is great at scripting languages, because of this simple scripts can be written easily and quickly which can make things much more automated and efficient.

2. Ruby is helpful when it comes to building servers and data processing, so it is easy for a beginner to get started with application development.
3. Matsumoto once stated that he made the language to be read more like English than other languages so it would be interesting to see if this language is easier to pick for average human than other languages.

## **5. PHP – 1996**

PHP is a general-purpose scripting language that is geared heavily toward web development. It was developed by Danish-Canadian Rasmus Lerdorf in 1993 but was officially released in 1996. PHP is used quite often in web servers and various web template systems.

### **Why PHP**

1. PHP can run on any OS such as Linux, Windows and UNIX which makes it portable and versatile. It also has faster loading over slow internet speed which makes it easy to load different applications when compared to other programming languages.
2. It has remained stable throughout the years as assistance has been provided to various versions of PHP. This allows PHP to be combined with many other programming languages in order to improve on its capabilities.
3. PHP can also do pretty much anything related to server scripting as it is used in most websites. This allows it to receive data and work directly with the database to accomplish a multitude of tasks all at once.

## **6. Kotlin – 2011**

Kotlin is the last general-purpose high-level programming language of this list. It was developed in July 2011 by JetBrains, a company that is led by Dmitry Jemerov. Kotlin depends on the Java class library for its own class but the syntax is not quite the same as Java although it is very similar. Kotlin was designed to be like Java, only better and it's also very similar to Java so companies don't have a hard time migrating from one language to another.

### **Why Kotlin**

1. Kotlin is almost identical to Java, which is also a language I am very familiar with so I just gravitated towards this language.
2. Kotlin is easy to use and supports multiple platforms making it versatile.

3. Excels at developing mobile applications whether than be in android or IOS and as I am very interested in mobile development I felt that I should include this in the list.