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CS 410w

Due Date: 01/16/2020

Assignment #2

1.

1. Python
2. Year released: 1991
3. Author: Guido van Rossum
4. Python is the easiest to learn and has become one of the most favorite languages for programmers. Python supports multiple programming paradigms and it is compatible with major platforms and systems. The syntax is simple, and it has a large standard library. The average salary in the United States is $120,000 yearly.

2.

1. JavaScript
2. Year released: 1997
3. Author: Brendan Eich
4. JavaScript is a client-side and runs very fast through the world wide web. Usable for both backend and frontend programming development. Works well with other programming languages. Most used in Machine Learning Application Development and Game Development. The average salary in the United States is $113,475 yearly.

3.

1. PHP
2. Year released: 1994
3. Author: Rasmus Lerdorf
4. Most used backend programming language of big companies such as Yahoo, Facebook, YouTube, eCommerce and more. PHP is easy to use for web pages and very successful with databases. The average salary of PHP developers in 2018 was $84,000 in the United States.

4.

1. JAVA
2. Year released: 1995
3. Author: James Gosling
4. JAVA is API rich programming language, multi-purpose programming language, and cross-platform abilities. High demand especially with Android Development, web and desktop application development. Great community support and a large number of free resources available. The average salary is $103,419 in the United States yearly.

5.

1. C++
2. Year released: 1985
3. Author: Bjarne Stroustrup
4. C++ has one of the faster execution of programs in programming languages. Support C functionality. Rich function library/Standard Template Library. Supports exception handling and overloading. Widely used for GUI application, games, and school/learning purposes. $113,665 per year is the average salary for C++ developers in the United States.

6.

1. GO
2. Year released: 2012
3. Authors: Robert Griesemer, Rob Pike, Ken Thompson
4. Go is easy to learn because its syntax is very easy. Easier to read, write and maintain because it is cleaner. One of the big influences of GO is being associated and maintained by Google. The average salary for Golang developers is $135,000 in the United States yearly.

7.

1. Swift
2. Year released: 2014
3. Authors: Chris Lattner, Apple Inc.
4. Swift has an English-like syntax that makes the readability easier. Adding new features is easy. It has automatic memory management that prevents memory leaks. The development process is faster for both frontend and backend development. Swift is very influential because it is developed and design by Apple for its products including macOS, watchOS, tvOS, and iOS. The average salary for Swift developer is $110,000 in year the 2018.

8.

1. Erlang
2. Year released: 1986
3. Author: Joe Armstrong, Robert Virding, Mike Williams
4. Erlang is great handling concurrency and distributed programming. It can handle several threads of execution by swapping between jobs. Erlang widely used for telecommunication systems. Uses OTP (Open Telecom Platform) for libraries that provide networking and telecommunication systems. The average salary in the United States is $135,000.

9.

1. C#
2. Year released: 2001
3. Author: Anders Hejlsberg
4. C# is a modern and general-purpose object-oriented programming language that provides the capability to work with shared codebases. The syntax is similar to C programming language but much safer because it does not allow pointers. It has faster compilation and execution time. It is an ideal use for the Windows operating system with a fully integrated .NET library. Widely used for games, Windows mobile applications, and backend development. The average salary of C# developers is $90,000.

10.

1. MySQL/SQL
2. Year released: 1974
3. Authors: Donald Chamberlin, Raymond Boyce
4. SQL is a relational database management system and used for retrieving and generating reports with a large amount of digital information. It has a powerful query language that allows quick data search and query.

11.

1. MATLAB
2. Year released: 1984
3. Author: Cleve Moler
4. MATLAB is widely used for statistical analysis, images processing industry and scientific research applications developments. It is rich in the library with scientific simulation. No compiler for execution which makes coding high efficiency and productivity. The code can be converted to C++, Java, and Python programming languages.

12.

1. Dart
2. Year released: 2013
3. Author: Lars Bak
4. Dart is a modern programming language that is designed for the user interface. Dart is similar to JavaScript. It is easy to use, code can be sent across in various ways including websites, mobile and API. The community is large and helpful.

13.

1. Perl
2. Year released: 1987
3. Author: Larry Wall
4. Perl is largely used for network programming, bioinformatics, finance and system administration. Perl is used for creating reports and scripts on the UNIX systems. It can imperative, functional or object-oriented that follows the traditional approach by using braces for functions and loops.

14.

1. Ruby
2. Year released: 1995
3. Author: Yukihiro Matsumoto
4. Ruby offers a Model View Controller architecture, a database abstraction layer and offers some great tools to allow the process of web application programming to be faster. It does well with both frontend and backend development. Ruby is a great language for beginners because it is simple and effective that provides object-oriented programming language. The average salary for Ruby developers is $75,000.

15.

1. Lisp
2. Year released: 1958
3. Author: John McCarthy
4. Lisp is one of the oldest and very successful programming languages. It is a fast-dynamic language because the syntax is simple. It has been proven and applied to research in systems, drug discovery, computational chemistry, and nanotechnology, artificial intelligence, finance, networking and more.

16.

1. Rust
2. Year released: 2010
3. Author: Graydon Hoare
4. Rust supports multi-paradigm. It offers safety, security, and concurrency. It supports the generic programming metaprogramming. Rust is a low overhead that is best for embedded programming. Some companies that use Rust are Dropbox, Cloudflare, and Yelp. $125,000 is the average salary for Rust developer in the United States.

17.

1. Kotlin
2. Year released: 2011
3. Author: Andrey Breslav, JetBrains
4. Kotlin is widely used in Android development. It provides simplicity, conciseness and easily maintainable that can help team efficiency. It can enable JavaScript support and interoperability that can helps frontend developers.

18.

1. R Programming Language
2. Year released: 1993
3. Author: Ross Ihaka, Robert Gentleman
4. R programming language is great for data analysis, machine learning and graphical methods. It provides a powerful package ecosystem and library for learning the algorithm. Widely used for academic projects. Companies that have used the R programming language are Google and Uber.

19.

1. TypeScript
2. Year released: 2012
3. Author: Anders Hejlsberg, Microsoft Corporation
4. TypeScript is an open-source programming language and created for large applications that can transcompile to JavaScript. It allows programmers to identify errors easier by adding static types. TypeScript offers free code editor which helps beginners to learn.

20.

1. C
2. Year released: 1972
3. Author: Dennis Richie
4. C is the core of modern languages and can be used on different types of computers. It is used for implementing system software and as a portable systems implementation language that provides simple, direct access to any addressable object. It is easy to write and debug. I chose C to be the last on my list because I believed that C++ and C are very similar but the programmer still needs to understand how to work C programming language.

<https://academic.oup.com/bib/article/19/3/537/2769437>

<https://www.dunebook.com/programming-languages-to-learn-in-2020/>

<https://www.thecoderpedia.com/blog/top-programming-languages-to-learn-2020/>

<https://blog.devmountain.com/20-top-programming-languages-2020/>

<https://hackr.io/blog/best-programming-languages-to-learn-2020-jobs-future>

<https://www.computer.org/publications/tech-news/trends/programming-languages-you-should-learn-in-2020>

<https://learnworthy.net/highest-paid-programming-languages-in-2019/>

<https://www.codeplatoon.org/the-best-paying-and-most-in-demand-programming-languages-in-2018/>

<https://www.whoishostingthis.com/resources/programming/>

https://en.wikipedia.org/wiki/History\_of\_programming\_languages

<https://en.wikipedia.org/wiki/Go_(programming_language)>

<https://www.techrepublic.com/article/rust-programming-language-seven-reasons-why-you-should-learn-it-in-2019/>