

الاسم: بسملة أسامه سعيد ذكي

الايمل الجامعي:

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GitHub-website

<https://github.com/Basmala-osama-saeed-Zaki/ECE001>

My Website URL

<https://basmala-osama-saeed-zaki.github.io/ECE001/>

Screenshots of my website

[Main page](#)

Programming Languages

Links:

[Home Page](#)
[Introduction of some programming languages](#)
[Advantages of Programming Languages](#)
[Uses of Programming languages](#)
[Algorithms](#)

Programming Languages

A complete description of a programming language includes the computational model, the syntax and semantics of programs, and the pragmatic considerations that shape the language. Keywords and phrases: Computational model, computation, program, programming language, syntax, semantics, pragmatics, bound, free, scope, environment, block. Programming languages are the medium of expression in the art of computer programming

languages allow us to give instructions to a computer in a language the computer understands. Just as many human-based languages exist, there are an array of computer programming languages that programmers can use to communicate with a computer. The portion of the language that a computer can understand is called a "binary." Translating programming language into binary is known as "compiling." Each language, from C Language to Python, has its own distinct features, though many times there are commonalities between programming languages. These languages allow computers to quickly and efficiently process large and complex swaths of information. For example, if a person is given a list of randomized numbers ranging from one to ten thousand and is asked to place them in ascending order, chances are that it will take a sizable amount of time and include some errors. There are dozens of programming languages used in the industry today. We've compiled overviews of the 12 most important, relevant and in-demand of these languages below.



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List of programming languages

- **A# :** is a part of the Ada programming language to the Microsoft .NET platform. A# is freely distributed by the Department of Computer Science at the United States Air Force Academy as a service to the Ada community under the terms of the GNU General Public License. AdaCore has taken over this development, and announced "GNAT for .NET", which is a fully supported .NET product with all of the features of A# and more
- **A++ :**
stands for abstraction plus reference plus synthesis which is used as a name for the minimalistic programming language that is built on ARS. ARS is an abstraction from the Lambda Calculus, taking its three basic operations, and giving them a more general meaning, thus providing a foundation for the three major programming paradigms: functional programming, object-oriented programming and imperative programming.
- **BCPL :**
is a procedural, imperative, and structured programming language. Originally intended for writing compilers for other languages, BCPL is no longer in common use. However, its influence is still felt because a stripped down and syntactically changed version of BCPL, called B, was the language on which the C programming language was based. BCPL introduced several features of many modern programming languages, including using curly braces to delimit code blocks. BCPL was first implemented by Martin Richards of the University of Cambridge in 1967
- **C++ :**
is a high-level, general-purpose programming language created by Bjarne Stroustrup as an extension of the C programming language, or "C with Classes". The language has expanded significantly over time, and modern C++ now has object-oriented, generic, and functional features in addition to facilities for low-level memory manipulation. It is almost always implemented as a compiled language, and many vendors provide C++ compilers, including the Free Software Foundation, LLVM, Microsoft, Intel, Oracle, and IBM, so it is available on many platforms
- **java :**
is a general-purpose programming language that is class-based, object-oriented, and designed to have as few implementation dependencies as possible. It is intended to let application developers write once, run anywhere (WORA), meaning that compiled Java code can run on all platforms that support Java without the need for recompilation
- **Python :**
is an interpreted, high-level, general-purpose programming language. Created by Guido van Rossum and first released in 1991, Python's design philosophy emphasizes code readability with its notable use of significant whitespace. Its language constructs and object-oriented approach aim to help programmers write clear, logical code for small and large-scale projects

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Advantages of Programming Languages

- 1. Easy to learn**
Time Magazine has stated that knowing a computer programming language can be good for you, and that it is a shame more people don't have this knowledge. Even former President Obama has issued a video urging young people to take up programming, as "learning these skills isn't just important for your future, it's important for our country's future". By starting with BASIC, you can create a framework for yourself to learn additional languages like C, C++, and Java. If you are currently working as an independent contractor, you will be able to maintain your flexible schedule with more time for your personal interests. And, as a highly demanded specialization, there is ongoing need for coders and programmers across almost every industry and a huge variety of business applications.
- 2. Enhanced problem solving skills**
Knowledge of computer languages enhances mathematical and logical reasoning and can be learned surprisingly quickly. These deduction skills will help you in all areas of your life, like making decisions and solving complex problems. BASIC programming was originally designed as a programming language used to teach people how to program, which makes it the perfect starting point for your computer science education. Once you've mastered the fundamentals, try expanding into Visual Basic programming (developed by Microsoft), one of the most widely used programming systems in the history of computer software.
- 3. Transferable skills across almost any industry**
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- 4. Opportunities for invention and innovation**
With more than 4 billion users on the internet, the application of computer coding is more important than ever. And, the computer science field attracts some of the most talented minds around the world. Graduates from programming or computer science courses secure rewarding and unique career opportunities in various fields, like environment, medicine, gaming, business operations and finance.

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Uses of Programming languages

Programmers use programming languages to communicate with computers. Each language has its own unique features, though they all share some similarities. It is virtually impossible to create a single universal programming language that meets all needs.

Programming Languages and its Uses				
HTML	JavaScript	C	C#	SQL
used extensively in Web development. HTML is the code that serves as the foundation of Web pages, allowing people to create and structure electronic documents for viewing online.	used by Web developers and software engineers to manipulate page elements to make them more engaging. JavaScript enhances HTML, and it is embedded in most Internet browsers.	used by software developers and systems analysts. Programmers use C to create applications that integrate with operating systems.	used by software engineers who create applications designed to work with Windows operating systems. C# shares similarities with Java.	enables programmers to create, read, update, and delete information in a database. Companies use SQL to gather data.

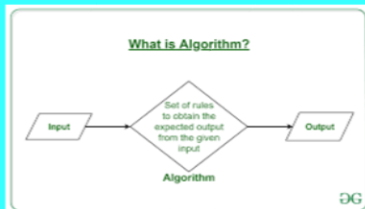
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Algorithms

you definitely need to understand the different algorithms and data structures used in computer programming. These algorithms can be used in any programming language. Also learning advanced concepts of a language definitely helps like LINQ in C#, directives in angularJS etc
In computer science, an algorithm is a finite sequence of well-defined, computer-implementable instructions, typically to solve a class of problems or to perform a computation.[1][2] Algorithms are always unambiguous and are used as specifications for performing calculations, data processing, automated reasoning, and other tasks.



Screenshots of the source code

Main page

```
1 <html>
2
3 <head>
4   <meta charset="UTF-8">
5   <title>Programming Languages</title>
6   <style>
7     body {
8       margin-left: 20px;
9       background-color: rgb(51, 255, 255);
10    }
11    h1 {
12      text-align: center;
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14      color: white;
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16      margin-top: 0em;
17    }
18    .bar li {
19      list-style-type: none;
20      padding: auto;
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29      padding-left: 20px;
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31    h2 {color: rgb(26, 30, 245);}
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49     each may be best suited for a certain purpose or purposes within certain industries. Some programming languages are used to create programs to solve problems or interpret data. Other programming languages are more
50     suitable for making create software or apps that entertain. With a strong need for unique and diverse programming languages, it is virtually impossible to create a single universal programming language that meets all
51     needs. Programming languages are often revised and even combined with other languages over time, evolving to meet our changing technological needs.
52 </div>
53
54 <br>
55
56 <table border="2">
57     <caption><b>Programming Languages and its Uses</b></caption>
58
59     <tr>
60         <th>HTML</th>

```

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        margin: auto;
      }
      a {
        color: black;
      }
      img {
        width: 450px;
        height: 260px;
        padding-left: 20px;
      }
      h2 {color: rgb(26, 30, 249);}
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