| **Statically typed languages** | **Dynamically typed languages** |
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| * A programming language is statically typed if the type of a variable is known at compile time | * A language is dynamically typed if the type of a variable is checked during run-time. |
| * statically-typed languages are Java, C, C++, C#, Swift, Scala, Kotlin, Fortran, Pascal, Rust, Go, COBOL, etc. | * Some examples of dynamically-typed languages are Python, Javascript, Ruby, Perl, PHP, R, Dart, Lua, Objective-C, etc |
| * The main advantage here is that all kinds of checking can be done by the compiler, and therefore a lot of trivial bugs are caught at a very early stage. | * Most scripting languages have this feature as there is no compiler to do static type-checking anyway |
| * String str = "Hello"; // variable str statically typed as string str = 5; // would throw an error since str is // supposed to be a string only | * some\_str = "Hello" # variable some\_str is linked to a string value some\_str = 5 # now it is linked to an integer value; perfectly OK |