

Kraken Programming Guide

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1 Compiling

Kraken compilation currently only supports building the compiler from source. You can clone the repository from a terminal using:

```
git clone https://github.com/Limvot/kraken.git
```

Once you have the repository, run the following commands:

```
mkdir build %Create a build directory
cd build
cmake .. %Requires cmake to build the compiler
make %Create the compiler executable
```

This will create a kraken executable, which is how we will call the compiler. Kraken supports several ways of invoking the compiler. These include:

```
kraken source.krak
kraken source.krak outputExe
kraken grammarFile.kgm source.krak outputExe
```

The grammar file is a file specific to the compiler, and should be included in the github repository. When you run the compile command, a new directory with the name of the outputExe you specified will be created. In this directory is a shell script, which will compile the created C file into a binary executable. This binary executable can then be run as a normal C executable.

2 Variables

Kraken has automatic type deduction. This is sort of like the duck typing of Python. The difference is that variables cannot change types. In this way, it is much more like an implicit "auto" keyword in C++. Unlike C++, semicolons are optional after declarations.

2.1 Variable Declaration

```
var A: int;           //A is uninitialized int
var B = 1;            //B is integer
var C = 2.0;          //C is double
var D: float = 3.14 //D is double
```

2.2 Primitive Types

The primitive types found in kraken are:

- a. int
- b. float
- c. double
- d. char
- e. bool
- f. void

3 Functions

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4 Input and Output

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