

# Arbor Language Specification

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# Contents

## 1 Introduction

1.1	Preamble . . . . .	
1.2	Overview . . . . .	
1.3	Compilation Process . . . . .	

# 1 Introduction

## 1.1 Preamble

This documents provides the specification for the Arbor programming language. All lexical and syntactical conventions will be described using a variation on the BNF specification. Lexical conventions will also be described using the equivalent regular expression following ECMA syntax. The rest of the document will be written in English rather than using formal notation; however, it still serves as the definitive description of the semantics of Arbor. This document is intended to be a detailed description of Arbor, not a tutorial.

## 1.2 Overview

This document is divided into 4 parts: The first part describes the lexical conventions of Arbor. The next part describes the object model. The thrid part describes the syntax and language semantics. The fourth and final part of the document describes the Arbor standard library.

## 1.3 Compilation Process

Arbor is static, strongly typed, compiled language. The compilation process occurs in the following order.

1. Comments are replaced by whitespace of an equivalent length
2. Adjacent string literals concatenated
3. The source file is lexed and converted into tokens
4. All import statements are resolved and deleted from the statements
5. The source file is parsed and compiled
6. All external references are resolved