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Chapter 1. Introduction

1.1 What is GNUstep?

GNUstep is an open-source implementation of the core Objective-C libraries used in macOS, including *libobjc*, *Foundation*, and *AppKit*. It's part of a broader endeavor to create a free software parallel to the closed, proprietary environment you're accustomed to with Apple.

If you are new to Objective-C, checkout the Objective-C 2.0 page.

One of the foundational ideas behind GNUstep is its ability to target multiple platforms, liberating applications from being confined to a single ecosystem.

To give you an idea, GNUstep with Objective-C 2.0 has native support for Linux, FreeBSD, OpenBSD, Android, and macOS.

Here's a bit of historical context: GNUstep descends from the original OpenStep project, a joint venture by NeXT (Steve Jobs's company between his Apple stints) and Sun Microsystems in the '90s. OpenStep was an innovative framework, defining an object-oriented API around Objective-C for developing cross-platform software. When Apple bought NeXT, they adopted this as the foundation of their new OS, which eventually evolved into macOS. The Cocoa framework you use on macOS/iOS is, in essence, Apple's proprietary evolution of the original OpenStep.

1.2 What is implemented?

The following table lists mature GNUstep projects, and their non-free counterparts. For more information, check out the respective project documentation.

Project	Known as	Description
libobjc2	Objective-C Runtime	Objective-C runtime library intended for use with Clang with all modern Objective-C 2.0 features
base	Foundation	General-purpose, non-graphical Objective C objects
corebase	Core Foundation	Non-graphical objects based on the CF API.
gui	AppKit	Library of graphical user interface classes
back	-	Rendering backend for AppKit (GNUstep abstracts drawing from backends)

1.3 Getting Started

If you are interested in developing with GNUstep you should start by installing it onto your favourite operating system. Below are operating system specific installation guides.

```objc
1   #import <Foundation/Foundation.h>
2
3   int main(int argc, char *argv[]) {
4       // This is a very long comment that exceeds the typical range of one line but I
            will continue as this is a long comment
5       @autoreleasepool{
6           NSLog(@"Hello World with a %@", @0);
7       }
8   }
```