

The entire process of converting Ada95 code into an executable program is shown below

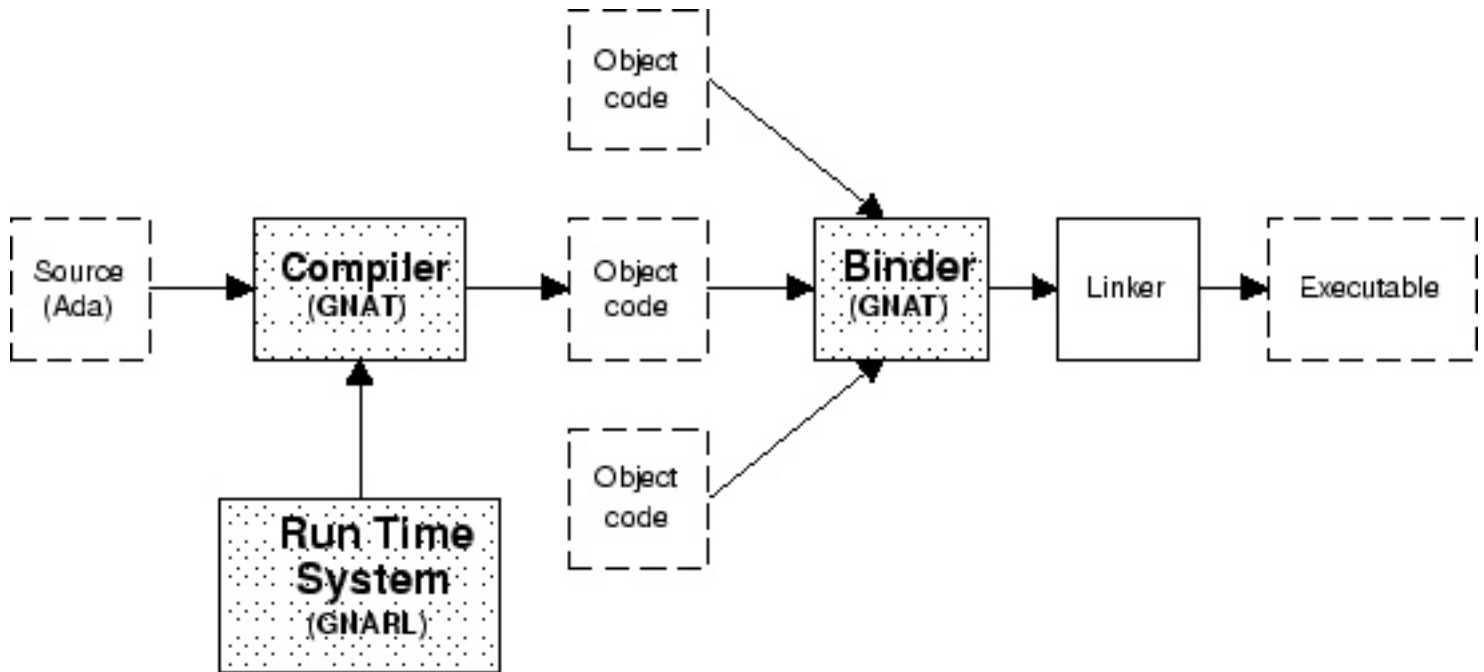


Figure 1. GNU Ada Translator (GNAT) Process *

It has three main parts: the *Compiler*, the *Run Time System* and the *Binder* (the GNU linker for the target operating system is always reused).

We will address the pieces in reverse order:

The GNAT binder verifies the consistency of the objects and determines a valid order of elaboration (initialization) for the objects (from the same or different languages) that are to be assembled into an executable file. Following this sketch, the next sections of this chapter describe each part of the compiler. This is summarized in slide 5 as “gnatbl”

All Ada language constructs are translated into calls to functions/ procedures in the GNARL (Gnu Ada Run-Time Library). This translation step is summarized as “system libs” in slide 5.

GCC (GNU Compiler Collection) is a collection of compilers for the C, C++, Objective-C, Ada, Fortran, Java and treelang languages. The Ada compiler of the gcc is referred to as gnatcc in slide 5.

* Figure From Javier Miranda – A Detailed Description of the GNU Ada Run Time.