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## **Ada Fundamentals - Lab 1 - Declarations**

AdaCore

The purpose of this lab is to discover the basics of the GNAT toolchain on Windows and to put that knowledge to use by declaring some variables.

## Getting Started with GNAT Studio

### 1. Start GNAT Studio

Start from the command line using `gnatstudio` or from the application menu via GNAT Studio

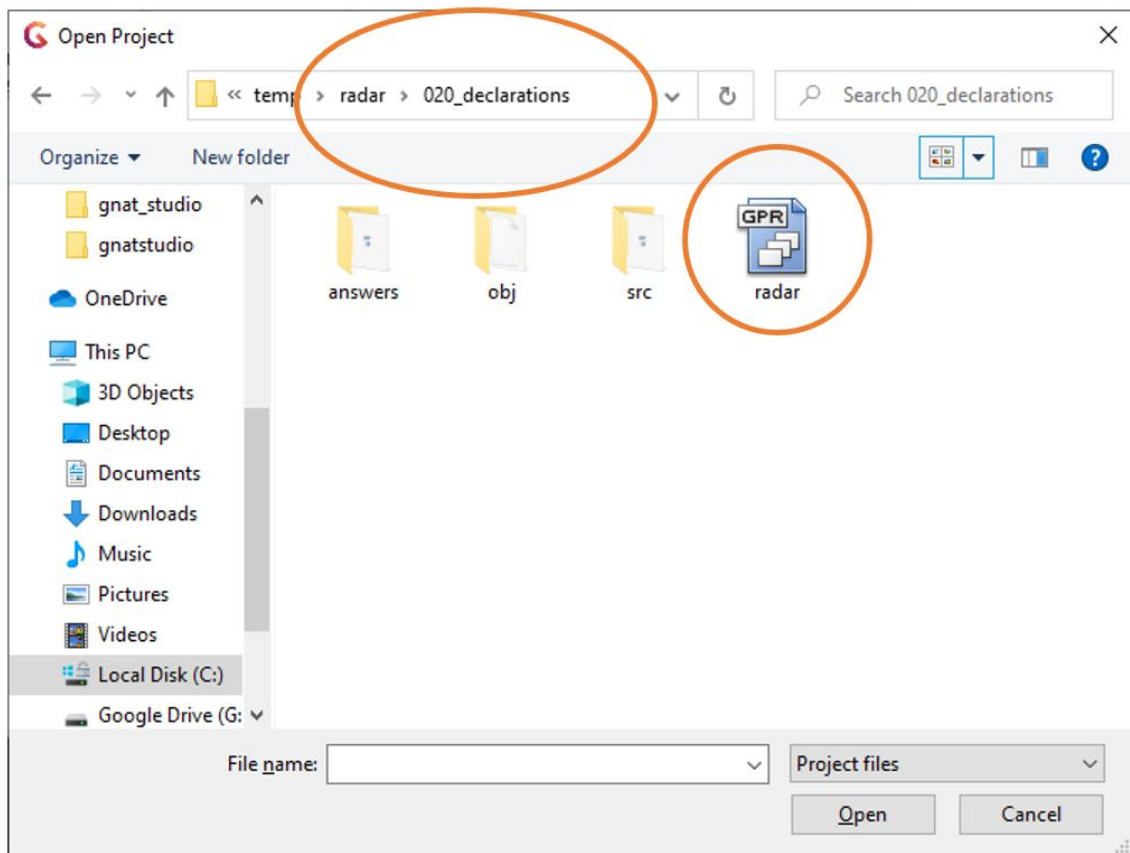
*Note: If you use the command line, and there is only one GPR file in the directory where you start GNAT Studio, then the tool will open that project automatically (so you can skip to Step 3)*

### 2. Open an Existing Project

- a. From the *Welcome* dialog, select Open Project

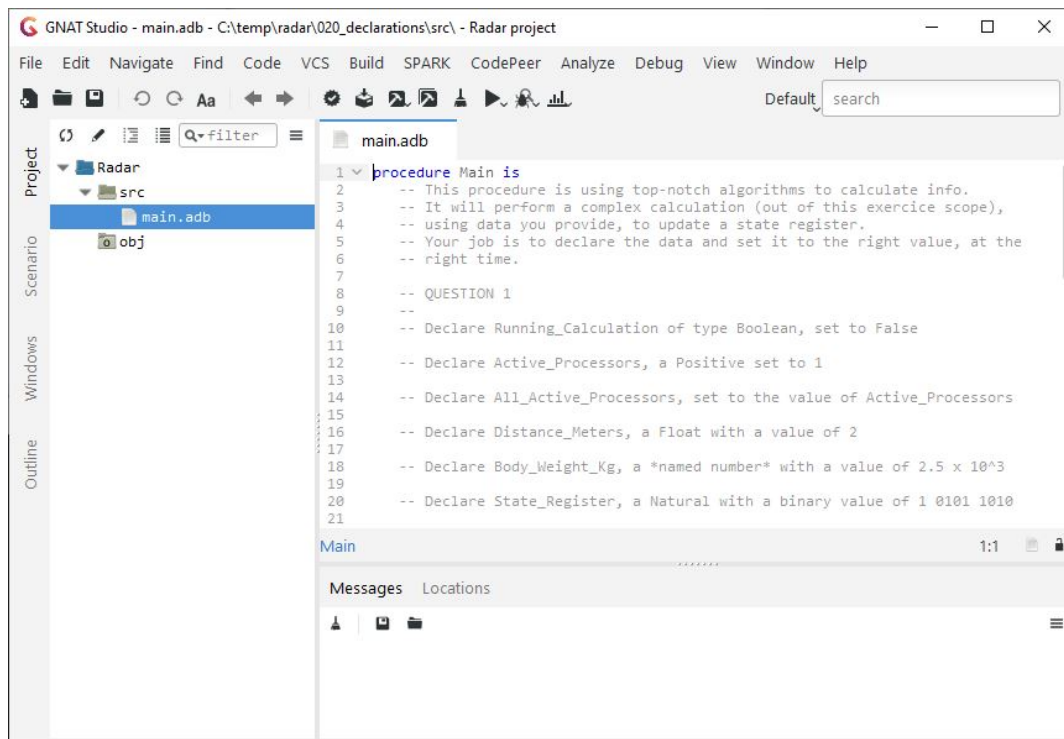


- b. Select the project directory
- c. Open the project `radar.gpr` file



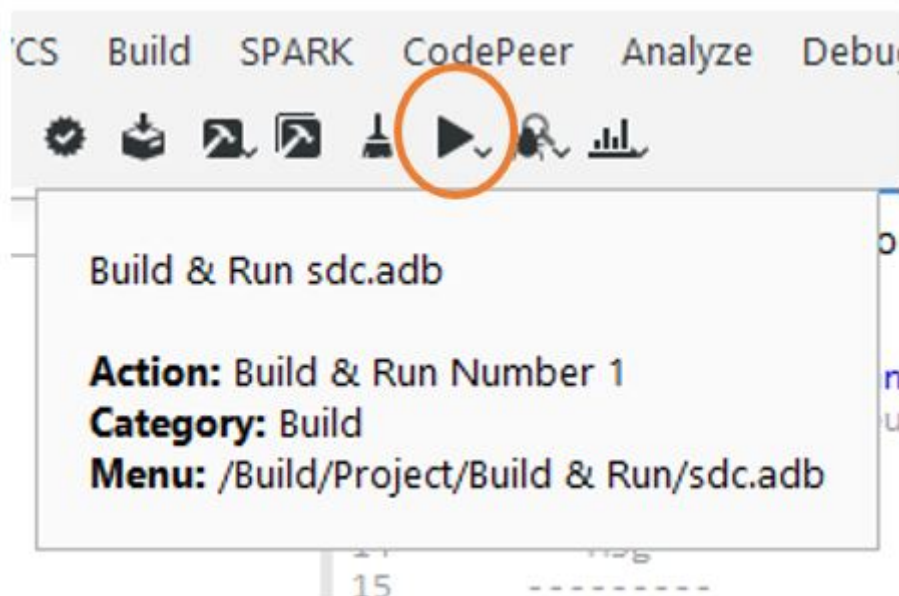
### 3. Open a Source File

In the *Project* pane on the left, double-click `main.adb` file under the `src/` directory



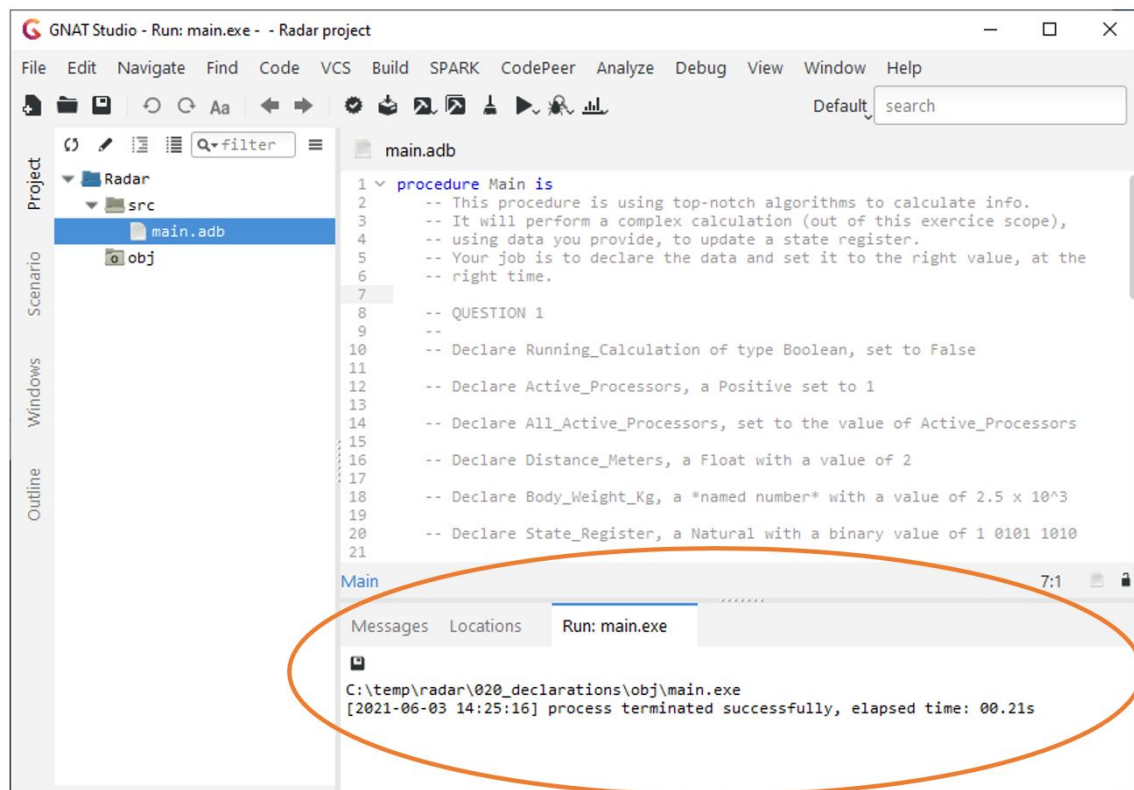
### 4. Build the Executable

- a. Locate and click on the Compile & Run button



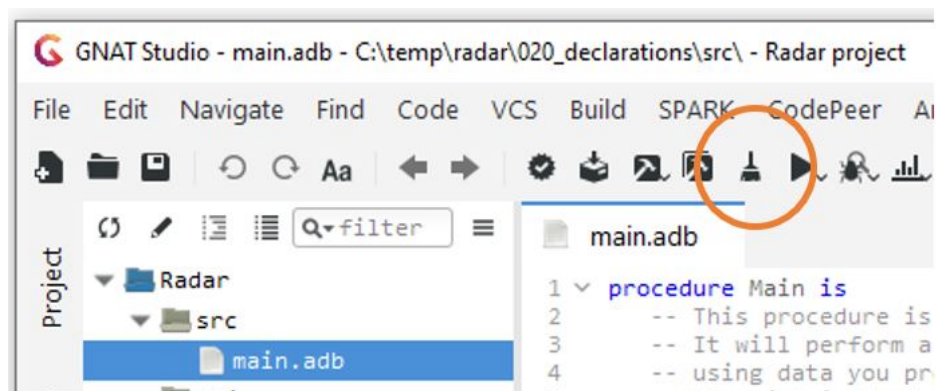
- b. Notice the compilation messages and run execution status at the bottom of screen.

*(It should succeed)*



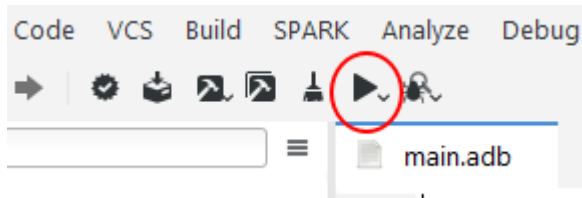
### 5. Remove Build Results

You can clean the project files by click the Clean button



## Questions

- Follow the instruction in the source file
- Locate and click on the "Compile & Run" button in GNAT Studio.



## Labs Tips

- Comment your code by using `-- Line comments`
- Ada identifiers are written in `Mixed_Case`.
- Use thousand separators when possible `1_000`
- Float and integer literals are not identical
- Ada types helps expressivity
  - Natural for counting things
  - Named numbers **constant** for perfect precision
  - Indexing is mostly used through Positive
  - Strict typing is a **pillar** of the language
- More resource on recommended Ada style can be found at [https://www.adaic.org/resources/added\\_content/docs/95style/html/sec\\_3/3-5.html](https://www.adaic.org/resources/added_content/docs/95style/html/sec_3/3-5.html)