

The Jack Compiler is used for compiling Jack programs into VM code.

A **Jack program** is a set of one or more .jack files, each written in the Jack language. The program files must be stored in one folder, and the name of that folder is taken to be the program's name. To clarify: Even if your Jack program consists of one file only, e.g. Average.jack, you must put this single file in a program folder. The folder can have any name, although in this particular example a sensible name will be Average.

The **editor panel** enables loading a program folder. The Jack files in that folder can then be edited, compiled, and sent for execution. The editor panel also enables creating a new .jack file in the currently opened folder.

Loading a Jack program

When loading a folder from the host file system, the compiler opens all the .jack files in that folder (in no particular order), and puts each file in a separate tab.

Editing files

Select a file tab, and edit its contents.

Saving files

All the changes made in the editor are saved automatically in the edited file, both in the browser memory *and* in the host file system (on the user's PC). This is a one-way sync: If you change a .jack file externally (outside the IDE), *you must reload the program folder into the compiler.*

Compiling a Jack program

All the open Jack files are compiled. If there is a syntax error, the compiler makes a best effort to catch and report it.

Running a Jack program

Following successful compilation, the Jack program can be executed. To do so, click 'Run'. This action loads the compiled VM code (from all the files) into the VM emulator, and passes control to the VM emulator. The VM emulator can then be used to execute the compiled code.

Creating a Jack program

Start by creating the program folder outside the IDE, using the host file system. Then use the IDE to open the folder and create/edit .jack files.

Error reporting

The compiler's error diagnostics is work in progress. Please help improve it by using the 'bug' icon to report the compilation problems you encounter. Make sure to include the relevant .jack file or copy-paste the problematic code segment.