

Using JCreator

JCreator is an *integrated development environment* (IDE) tool for composing Java programs. This is only one of hundreds of similar tools for java programming, with some as small as 300KB and others requiring an entire CD to store just the installation program.

The Java *software development kit* (SDK) includes only the compiler (javac.exe) and interpreter/executor (java.exe), but no tool to actually write the programs.

Note: In the latest release of the Java SDK, SUN has included Net Beans and an IDE. This IDE is large and robust, and intended for professional programming. Further, the Java application programming interface (API) documents are also available for download

The **JCreator** IDE allows for clear and understandable program composition, with automatic colour-coding, intending, along with easy compiling and execution. If available, JCreator can use the API documents.

1. Creating a New Program File, and Entering Your Program

From within JCreator, select **File**→**New**→(click on **Files** tab) → (click on **Java File**), then,

- specify the location by typing in **F:**\ in the dialog box, or clicking on the box with three dots (...) to find **F:**\ and make it the active folder
-- *F:*\ is your personal network space; for saving a file, this can be any drive/folder: C:\temp or A:\
-- some JCreator installs require programs to be within a folder not the root, such as **F:\myfiles**
- type in the filename of the file (such as **MyProgram.java** , this must be the same name as the class name of your program and in the same letter case)
- MAKE SURE THE ADD TO PROJECT BOX IS NOT CHECKED. ← **very important!**
(many later difficulties are avoided by ensuring that this box is not checked.)
- Click the **OK** button when done
- A blank program document should appear, in which the program can be started

2. Preparing to Compile Your Program—the SavitchIn.java file

Before compiling most programs in COMP123, the *input utility class*, **SavitchIn.java**, must be compiled and available to JCreator. Although on the CD-ROM (in multiple locations of the **.zip** file), the file is much easier to find on the *local area network* (LAN) **H:\Comp113**.

The class provides simple input statements for java programs, but to be used, it must be available in compiled form, meaning that the SavitchIn.java is compiled to **SavitchIn.class**.

Copy the SavitchIn.java and .class files to the **F:**\ drive, or wherever your programs are (only have to do this one time for all programs in the folder!),

- Open **SavitchIn.java** from **H:\Comp113**
- Keep the name the same, but save the file in your working folder, or location of the new program file
- Compile **SavitchIn.java** (source code) to create **SavitchIn.class** (byte code)
 - use the Build menu: **Build**>**Compile File**, or
 - click on the button with the icon of a document and a RED down arrow

3. Compiling Your Program

With the SavitchIn.class *utility class* (the category of classes that include handy little routines) ready for use, all new programs can be compiled and executed.

Compiling a program (correctly called a *program class*), translates it from a **.java** program file to a **.class** bytecode file. Executing a program is interpreting a **.class** file to machine language through the *Java Virtual Machine* (which was installed by the SUN Java SDK).

To compile a program file, follow similar steps used to compile SavitchIn.java. Any *compiler errors* in a program are displayed by JCreator in a small window at the bottom of the screen, with *file name of the program, line number of the error, and the error message*.

4. Executing (Running) Your Program

With an error-free byte code resulting from the compiler, the program is ready to execute, or "run". Use either,

- i) Build menu: **Build->Execute File, or**
- ii) click on the button with the document and 2 blue dot (next to the compile button)

A *command prompt* window will open and the program will begin running. Any errors that occur during execution are called *runtime errors*, and the program will terminate immediately.

If a run-time error occurs, just close the command prompt window and return to JCreator—*then try and find the error!!!*

5. Saving Files

Although JCreator saves files during each compile, it does not save during simple editing. To prevent accidental loss of work between compiles, make it a habit to save periodically.

Either select **File->Save**, or just press <CTRL><S> which is the shortcut key for **Save**.

6. Printing from JCreator

Although **.java** files are just simple text documents, and can be printed from Notepad, Wordpad, or even MS Word, JCreator produces nicely formatted and well-detailed printout of programs. On each page of a source code printout are included: *the name of the file, date, and "page" of "total pages."*

To print, use one of the following,

- i) File menu: **File->Print, or**
- ii) press <CTRL><P>

7. Finishing and Exiting JCreator

After saving your file, select **File->Exit** to close JCreator. If saving to a diskette, make sure that the diskette is not removed until JCreator is closed (to ensure that the program file is closed properly).

NOTES (Comments from previous usage of JCreator in the UCC computer labs):

- The colour-coding of programs is extremely useful in seeing the structure of programs, and determining errors in syntax (mistypings)
 - JCreator can also be used to compile HTML files (i.e., webpage files)
- Recently edited files can be re-opened by using the menu: **File->Recent Files**.
- Since some JCreator installs produce errors if programs are compiled in the root folder (which is the \ of **F:**), create a new folder on the drive to write programs: **F:\myprogs**
 - this idea can be extended to have a separate specific folders:
F:\myprogs\exercises, F:\myprogs\assign1, F:\myprogs\playing