WS 1 : Using Dev-Pascal

Basic Concepts

1. Dev-Pascal

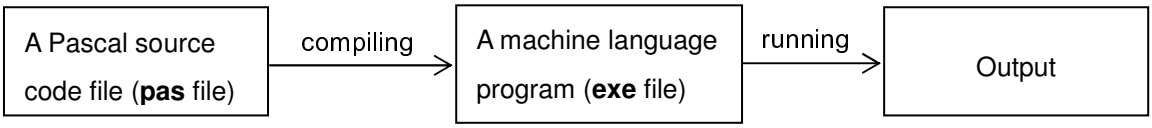
Dev-Pascal is a full-featured integrated development environment (IDE), which is able to create console-based Pascal programs using the Free Pascal compiler.
You can download the software at http://www.bloodshed.net/dev/devpas192.exe.

At school, to run Dev-Pascal, click the Short-cut 

on a Windows desktop.

2. Compiling and Running a Pascal Program

When you type in a Pascal program, you create a Pascal source code file (with file extension **pas**), which comprises only of English or numerical characters and symbols. To run the program, the source code file must first be compiled (translated) into a machine language program (with file extension **exe**). This machine language executable is then executed directly by the computer.



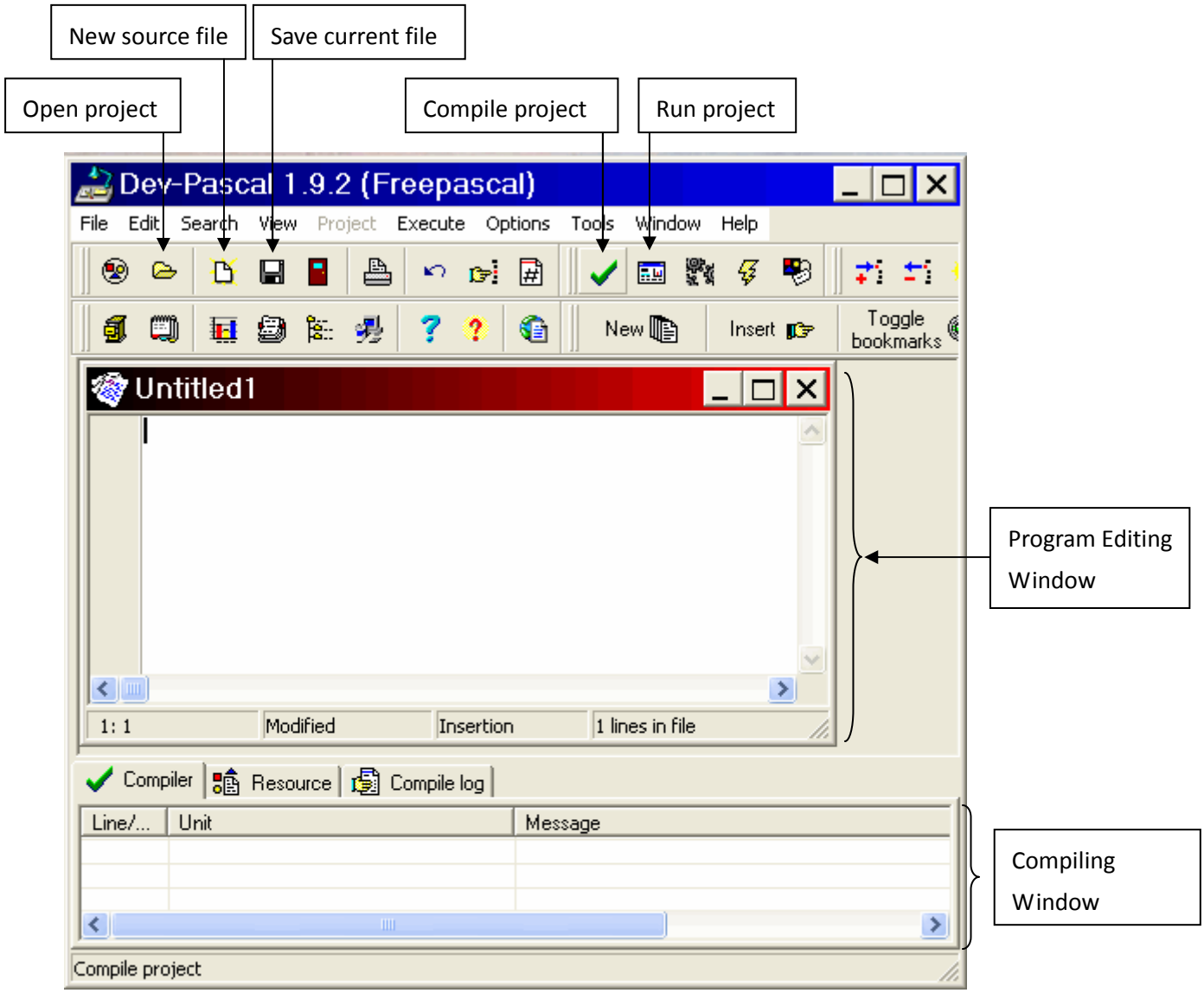
Compilation and Running of a Pascal

The Dev-Pascal Environment

1. Dev-Pascal Desktop

The figure shows a Dev-Pascal desktop. On the desktop, there is a **Program Editing Window** holding an empty Pascal program named **Untitled1**. We type in and edit a program in this window. In the bottom part of the desktop, there is a **Compiling Window** through which Dev-Pascal sends us compiler and other messages regarding compilation.

The icons for some commonly used commands are also named in the figure.



In this worksheet, only commands for operations are given. You can always, and are advisable, to use the corresponding icons or short-cut keys to issue the commands.

Creating and Running Your First Program

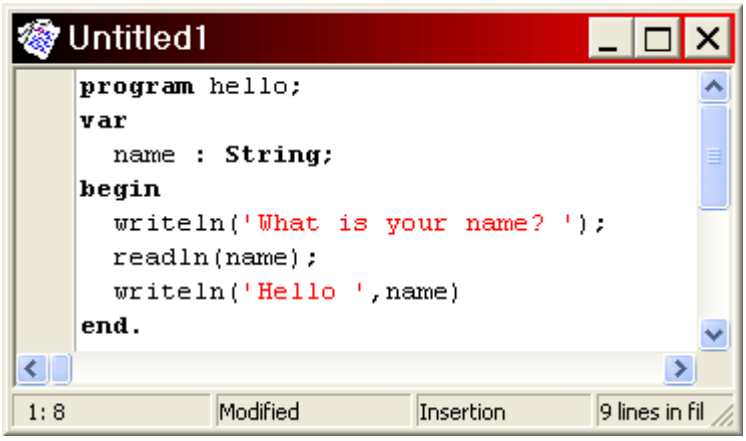
1. Typing in a Program

Open Dev-Pascal.

Choose **File > New Source file** to open a **Program Editing Window** with a new file.

(Never use **File > New Project...**. If you do, click **File > Close project** to close it.)

Type in the following program exactly as it is.



Note: Different types of text in a program are automatically formatted to help programmers distinguish them.

2. Saving a Program

Choose **File > Save unit** and save the program to your **S** drive with the file name **ws1_hello**.

Dev-Pascal will add the file extension **pas** to the file name.

3. Closing a Program File

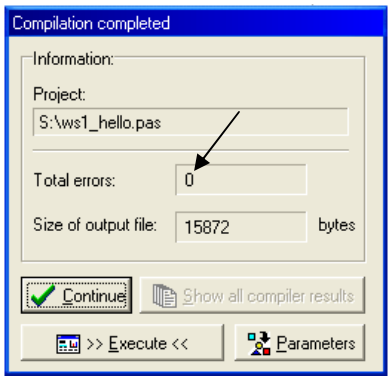
Choose **File > Close** to close **ws1_hello.pas**.

4. Open a Program

Choose **File > Open project or file...** to open **ws1_hello.pas** from your **S** drive.

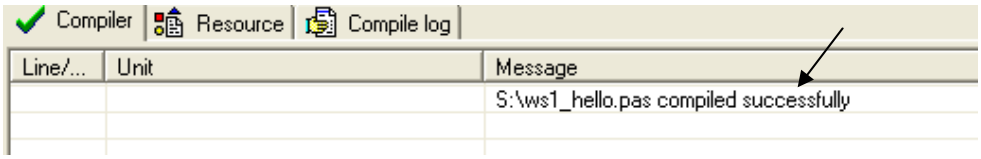
5. Compiling and Running a Program

Choose **Execute > Compile** to compile the program **ws1_hello**.



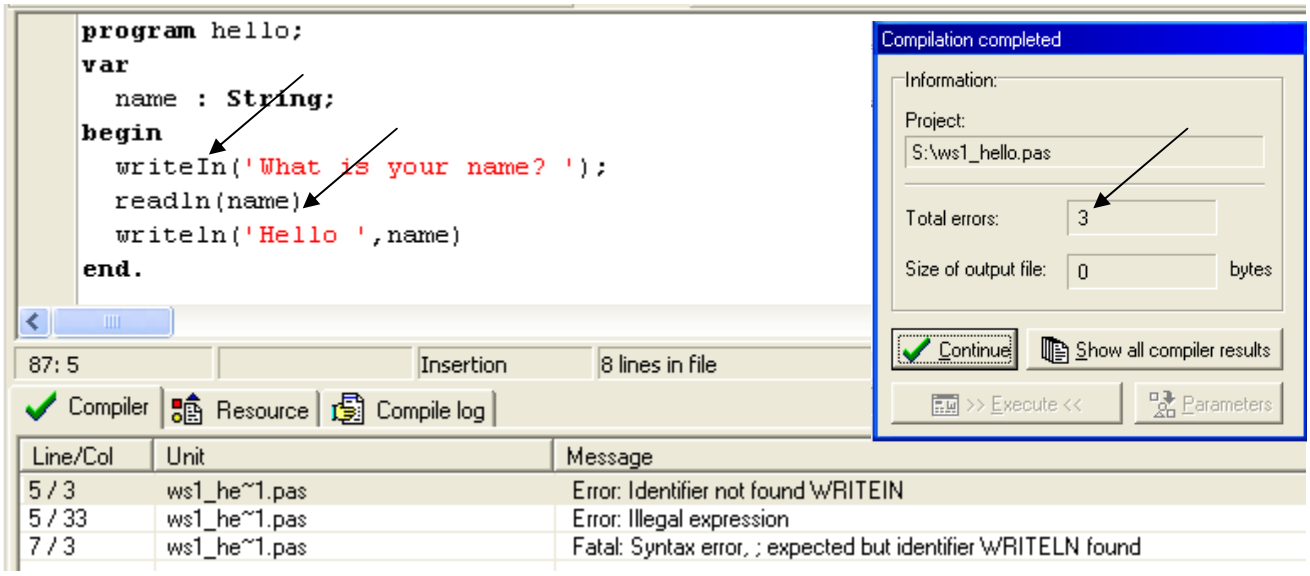
There are two possible results.

If there are no errors in your program, you will see:



You can click **Continue** to return to editing or **Execute** to run the program.

If there are errors in your program, you will see:
(The program below has two errors: the '`l`' being mistyped as '`I`' and the '`;`' being left out.)



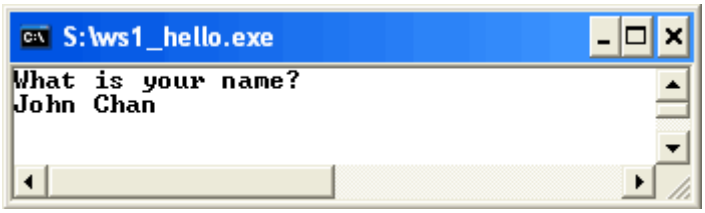
In the **Compiler** tab of the **Compiling Window**,
the **Message** column shows error messages for the erroneous statements and
the **Line/Col** column shows the lines and columns where the errors are located.
For a program with many lines, you can double-click an error-message row to highlight the corresponding statement in the **Program Editing Window**.

Now, try to locate and correct errors in your program, if there are any. Or create some errors in your program and experiment with how Dev-Pascal handles errors.

6. Executing a Program

To run **ws1_hello**, choose **Execute > run**. (Or click the **Execute** button in the **Compilation completed** window.)
(Actually, choosing **Execute > run** performs compilation and execution in one go.)

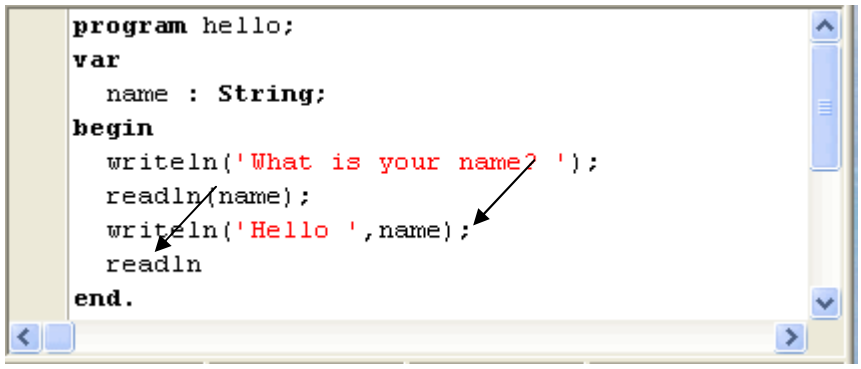
You will see the following **Console (Command Prompt) Window**.
Type in **John Chan** and press the **Enter** key to input the name to the program.



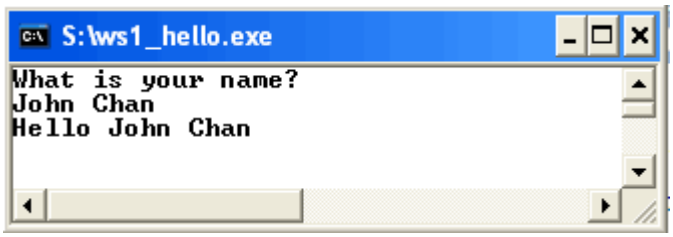
After accepting the input, the program will finish its execution and the **Console Window** will close immediately, leaving you wandering about the final output. One way to hold the **Console Window** is to add a `readln` statement to the end of the program. After seeing the program output, we can press the **Enter** key to end the program.

From now on, always put a `readln` statement as the last statement of your programs for this purpose.

Try this out now: add the ending `readln` statement and a semi-colon to separate it from the statement before it, then compile and run the program again.



After entering **John Chan**, you will see:

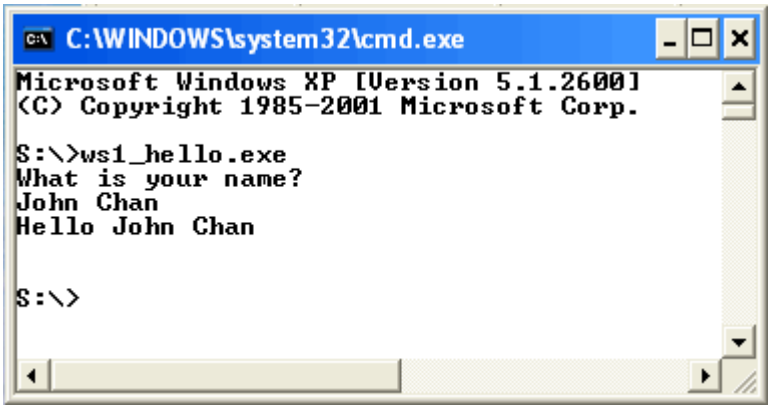


Press the **Enter** key to end the program and the **Console Window** will close.

7. Running an executable (program) in the Console Window.

The executable **ws1_hello.exe** can also be run in the **Console Window** without the presence of Dev-Pascal.

In Windows, choose **Start > Run...**, then enter **cmd** in the **Open:** box to open the **Console Window**. To the prompt **`:\>,`** enter the program name **s:\ws1_hello.exe** to run the program.



8. Hints

After editing a program, you must compile it again by choosing **Execute > compile** before it is run.
Choosing **Execute > run** only runs the executable compiled before the editing.
Saving a program before running is always a good move to ensure that your hard work will not be lost.