PDE - C

User's Manual

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1.0 Introduction

1.1 System Requirements

1. An installation of Java Runtime Environment 8 must be installed on the target machine.
2. gcc.exe and gdb.exe must be present on the target machine, it must also be present on the Environment Variables of the machine.

1.2 Installation

No installation of PDE-C is required. If the system requirement is met, PDE-C will run on the target machine.

2.0 PDE-C

2.1 Opening the Program

Double-click the PDE-C.jar to open the PDE-C. The user will need to log in using the user's Student Number as seen in figure 2.1. If the user do not wish to use the network features of PDE-C, the user may feel free to leave the textfield blank as indicated below, however, the user would not be able to Send C Files over the server. Take note that the user must first be registered to the database of PDE-C located in the professor's machine. Please contact your professor regarding this matter.
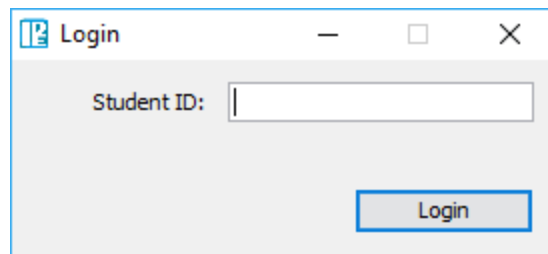
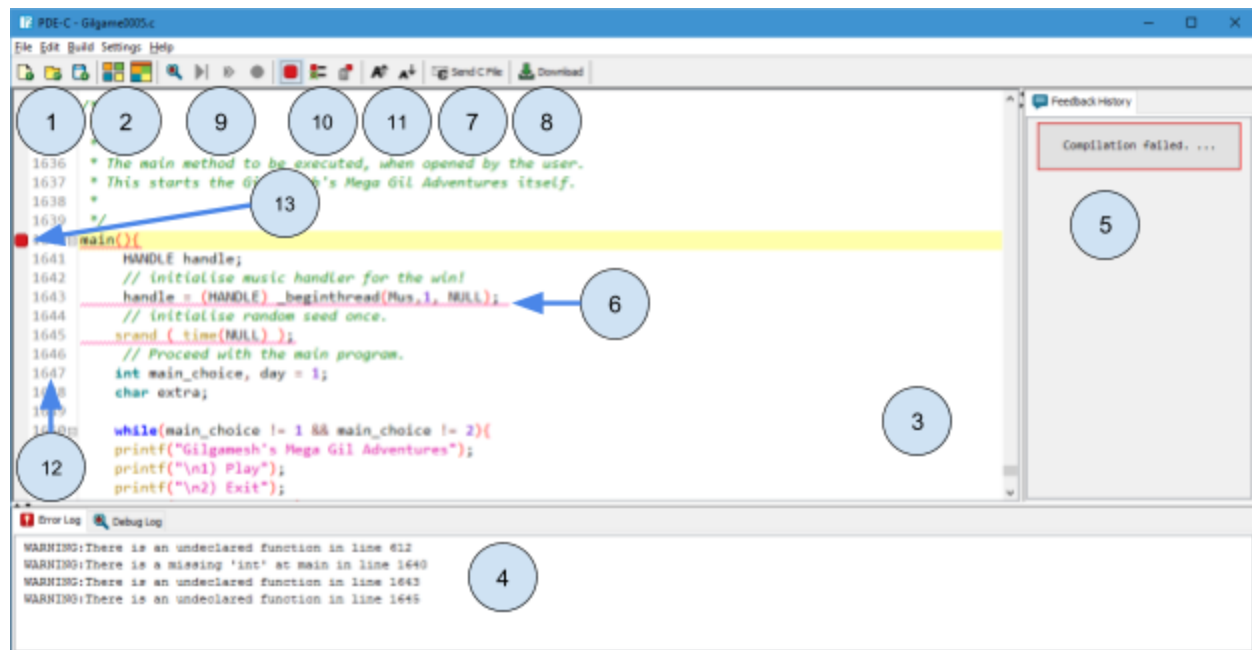Figure 2.1 Login screen of PDE-C

2.2 PDE-C Main Windows

Figure 2.2 PDE-C main window view

Figure 2.2 shows the main window of PDE-C where the user can access most of the functions.

Legend:

1	File Operations (New, Open, Save)
2	Build Operations (Compile, Compile and Run)
3	The editor
4	Error Log
5	Feedback History
6	Error Highlighting
7	Send C File
8	Download Activity
9	Debugging Operations (Debug, Step Over, Resume, Stop)
10	Breakpoint Operations (Add Breakpoint, Remove Breakpoint, Remove All Breakpoints)

11	Font Size Buttons (**A**↑ Increase/ **A**↓ Decrease Font Size)
12	Line Numbers
13	🟥 Breakpoints

2.3 Creating a new file
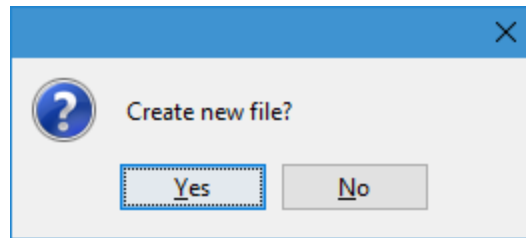
Figure 2.3 Confirmation dialog for creating new file

By clicking 🗎 New, the user can create a new source code. The prompt, as seen in figure 2.3, will appear if the user wish to create a new source code without saving changes.

2.4 Open a new file
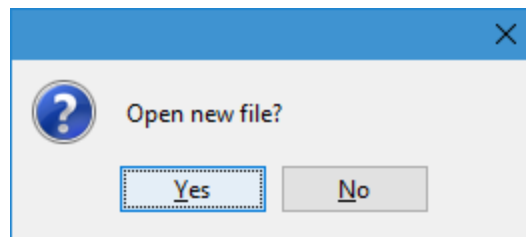
Figure 2.4 Confirmation dialog for creating new file

By clicking 📂 Open or CTRL + O, the user can load a source code saved inside the machine's storage. The question shown in figure 2.4 will be prompted if the user wish to load a source code without saving changes.

2.5 Saving a file
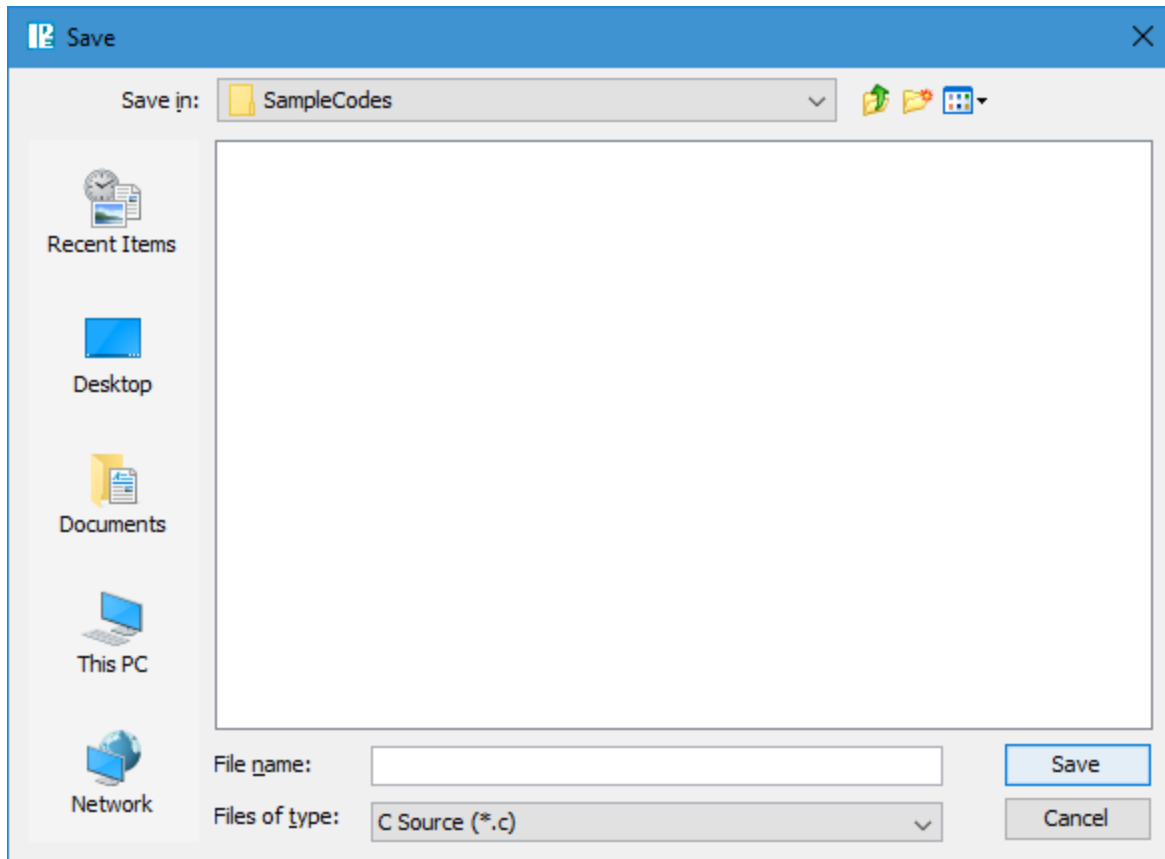
Figure 2.5 PDE-C user interface for saving

Figure 2.5 shows how a user can save his file in any location that he wish to save, however, there are certain limitations that needs to be observed. The user must click the Save button or CTRL + S. Take note that you cannot save your file in a folder that contains spaces, as well as the filename itself is not allowed to contain spaces or else compilation will fail.

2.6 Exiting the Program

Figure 2.6 Confirmation dialog for exiting PDE-C

The user will be asked if he want to exit the current session as seen in figure 2.6. If the user exits PDE-C, all changes to the user's currently open source code will be lost if he did not save his source code.

2.7 Compile

Figure 2.7 Dialog box for compiling a source code

To compile, the user must click the Compile Button by clicking or pressing F9. Figure 2.7 will be displayed if the user have successfully compiled a program with no errors. Take note that this action will just compile a source code into an executable file.
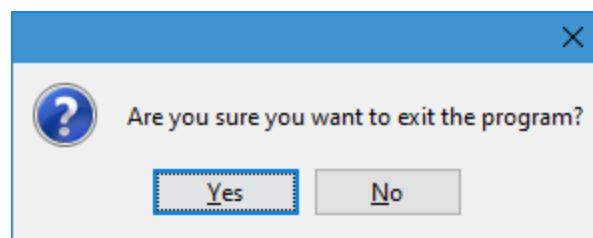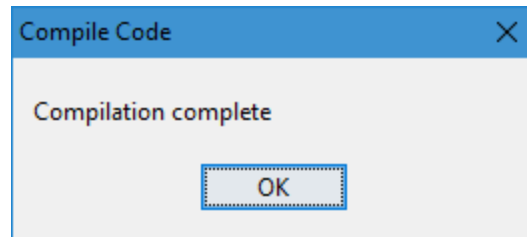
2.8 Compile and Run

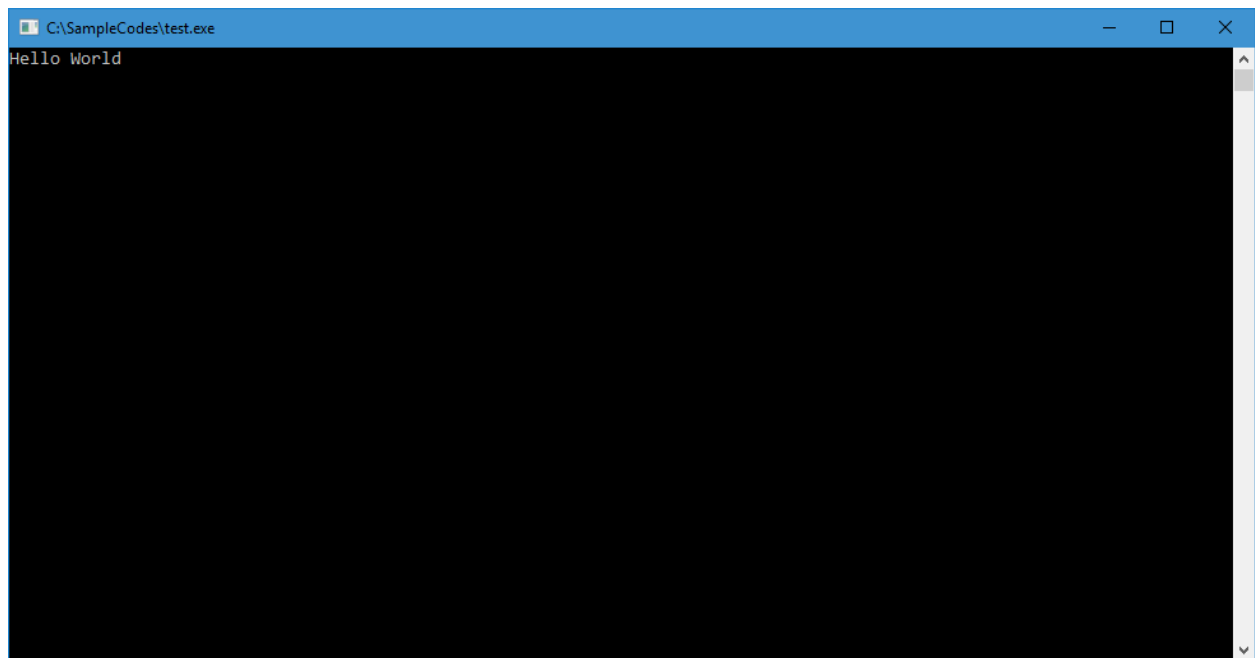Figure 2.8 A successfully compiled program

The user must click the Compile and Run Button by clicking or pressing F11. Figure 2.8 will be displayed if the user have successfully compiled and run a program with no errors. However, if the user saved a source code to a folder or file that has spaces, it will not run. The program would not compile and run automatically if the user's code is unsaved.

3.0 Debugging your own Program

3.1 Debug

To activate the debug feature, press the F10 or click the Debug Icon . The debugging manager will appear.

3.2 Breakpoint

A breakpoint is an intentional stopping or pausing location in a program, put in place for debugging purposes. If you run your code in debug mode, your code will automatically stop when it reaches a breakpoint, which will allow the user to view the values of his variables at certain points of his program.

3.3 Add a Breakpoint

To add a breakpoint in your code, click on a line of code in your program where you want the breakpoint to be. This will highlight the line where the desired breakpoint would be placed. Then press CTRL+F5, if the breakpoint does not exist, the breakpoint will be added. Alternatively, you can also add a breakpoint through the use of Add Breakpoint Icon . From there, you can specify which line you want to add a breakpoint. You can add a line number from the first line until the last line. Inserting a number not present within the visible line numbers would make adding a breakpoint fail.

3.4 Remove a Breakpoint

To remove a breakpoint in your code, click on a line of code in your program where you want the breakpoint to be removed, then press CTRL+F5, if the breakpoint exists, the breakpoint will be removed.

Alternatively, you can also remove a breakpoint through the use of Remove Breakpoint Icon . From there, you can specify which line you want to remove a breakpoint. You can remove a line number from the first line until the last line. Going more than the line number of the file is where adding a breakpoints will fail. From there, The button will be disabled if there are no breakpoints in the editor.

3.5 Remove All Breakpoints

Removes all existing breakpoints. To do this, press the Remove Breakpoint Icon . From there, The button will be disabled if there are no breakpoints in the editor.

3.6 Step Over

Proceeds the program to the next line.

3.7 Continue

Proceeds the program up to the next breakpoint.

3.8 Stop

Stops the debugger.

3.9 Track Variables

Tracks a specific variable. The variable being tracked will be marked as green.

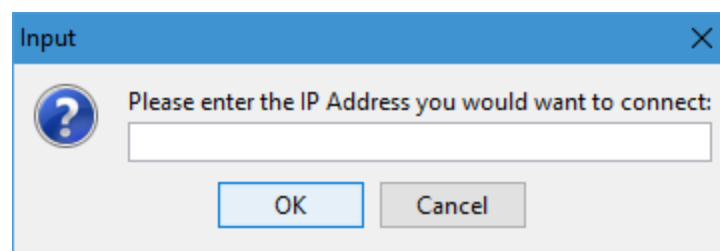| Variable Name	Value
a	97 'a'
b	98 'b'
c	52 '4'
x	4
y	1
z	4

4.0 Network Functions

Figure 4.1 Dialog for entering an IP Address

Figure 4.1 would be displayed every time the user would want to download or send a C file. The user can also set the IP Address via **Settings** > **IP Address of Server**.
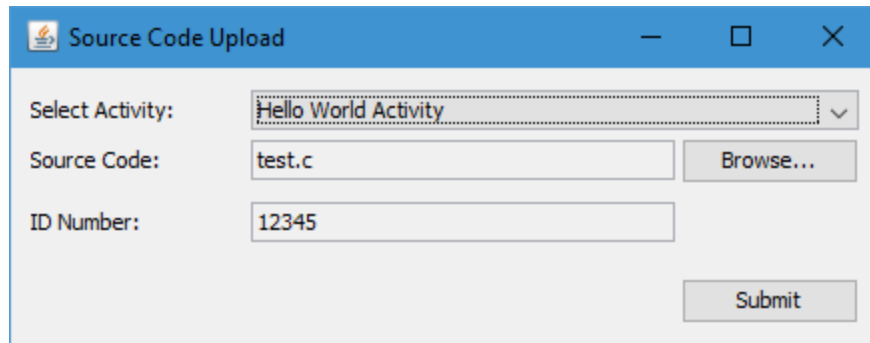
4.1 Send C File

Figure 4.2 Sending of source code to PDE-C Server

The window shown in figure 4.2 will only be activated if the user entered his or her student details as shown in figure 2.1 . The user can browse the file that he or she wish to submit if he or she want to submit a different deliverable. Afterwards, click **Submit** to send the C source file to the professor in charge.
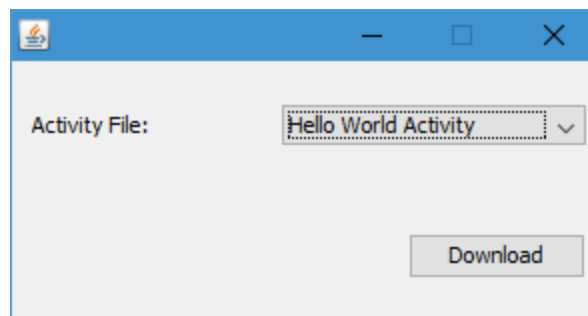
4.2 Download

Figure 4.3 Dialog for downloading activity

The user can download the activity his or her professors instructs him or her to download, as seen in figure 4.3. These activities are uploaded in the Server, which, the professor is in charge of uploading.