## Bug insect icon Royalty Free Vector Image - VectorStock**H6: Debugging Code with GDB**

#### Answer Sheet

Name:

**Compiling**

1. Write the size (in bytes) of the executable

17928 bytes

1. Write the size (in bytes) of the new executable

20968 bytes

**Starting GDB**

1. Copy the first line that is printed when you run gdb:

GNU gdb (GDB) Red Hat Enterprise Linux 8.2-16.el8

1. Now, copy the portion in the quotes on the line that states "This GDB was configured as"

For instance, in the example above, you would copy **i686-linux-gnu**:

x86\_64-redhat-linux-gnu

**Getting Help**

1. Write the number of topics/classes:

12

1. Write the first line printed after the executing the command here

Set breakpoint at specified location.

**Running a Program**

1. Try it now. What happened?

The command output:

Starting program: /home/ryuan/CS262/lab6/lab6\_ryuan\_203/lab6

Usage: /home/ryuan/CS262/lab6/lab6\_ryuan\_203/lab6 [1 2]

1 = Mode 1

2 = Mode 2

[Inferior 1 (process 1172607) exited normally]

1. Try the run command again, this time adding "1" (without quotes) to the command line. What happened this time?

The command output:

Starting program: /home/ryuan/CS262/lab6/lab6\_ryuan\_203/lab6 1

Here we are in DebugOption1()

The sum of integers from 0 to 10 is: 1013

[Inferior 1 (process 1179182) exited normally]

**Setting Breakpoints**

1. At what line number does execution pause?

Line 55

**A Brief Digression**

1. Write what you see as a result:

$1 = 1

**Stepping Through Code**

1. Use the print statement mentioned above to print the current value of sum.

What is its current value?

$2 = 0

1. Now, use the step command to step over the current line.

At what line does the execution pause?

58

1. Print the value of sum again. What is its value now?

$3 = 0

1. Print the value of sum:

0

**Displaying Variables**

1. What is the value of the variable 'i' at this point?

i = 6 at this point

1. Once you see what the bug(s) is/are, describe it/them below:

When the program does the summary, it put the “sum” as a variable and add it to the result. The correct function should be sum = sum + i which is sum += i; But the program write it sum += sum + i which equals to sum = sum + sum + i.