

Extra Credit (2 points)

Com S/SE 417 Spring 2024

Handed out April 23rd, 2024

Due at 11:59 PM April 28th, as a pdf uploaded to Canvas

Homework Policy

Homework Policy: The homework assignment should be done individually. You may talk to classmates about the problems in general, but you must complete the homework on your own. You are not permitted to use published answers from websites, etc. Assistance by others must be specifically credited in the solution to the problem that is turned in, describing what the contribution was (e.g., "Thanks to [name] for explaining X in Problem Y", not "Thanks to [name] for help with HW1."). The Dean of Students Office offers several good [resources](#) to build understanding of how to avoid plagiarism, such as Purdue's

There is no late handin for the extra credit

Assignment:

For this extra credit you will visit the web page of the GCC compiler bug reporting system:

<https://gcc.gnu.org/bugzilla/>

Use the search facility to restrict yourself to bugs reported in **GCC** that C++ and both **resolved** and **fixed**. You should spend some time to learn how to use the search facility to make this easier. Make sure to choose **bugs that were fixed in the last 3 years (i.e. from 2021-present)**.

- (a) Select **two of these bugs** and **provide details of the bug** (the problem/references to bug number) and a description summarizing **both the problem and the fixes**. At least **One** of these should be a **critical** (or blocker) bug. You will need to play with the search facility to identify these. Find the **patches for each bug** and include the diff for the changes as well. **(55 points)**
- (b) **Use 2 concepts/techniques** from this class (your choice) and use the example bugs and to explain how these concepts could have helped you to find the bugs you are describing. This should be very specific with relation to the examples from part (a). *It is not enough to say "use technique X to find a bug or measure code" or "use regression testing to retest"*. We are looking for details about **how** the technique could have been applied and **why** it might help the bugs from part a. **(45 points)**

Grading:

Grading will be based on how well you (a) follow instructions and on (b) how much depth and insight you provide, and how well you **connect the class concepts** to these specific bugs.