For our final project, we implemented a bug-management system/webpage. This page allows users to create, view, edit, resolve, or otherwise manage bugs as needed. The problem we were solving was the relatively hectic way that bugs are currently handled. This often leads to shoddy software, as bugs are easily overlooked, forgotten about, misunderstood, or handled incorrectly. Because of this, we came up with characteristics that we thought would address the nature of these problems. These features include an organized, central location for all bugs, categorization of bugs to bring attention to those that need it most, and user input/collaboration so that all information is available to everybody at all times. These characteristics, we believe, would help developers (as well as users) of software to quickly submit, review, and address bugs as needed in as efficient and productive a way as possible.

The layout of our webpage is designed to present the user with any/all needed data as quickly as possible. They don’t have to do much navigation (if any at all) to get to the bug(s) they need or submit a new bug(s). At the very top is the header, which contains the site’s name and logo. More importantly, it contains the button needed to create a new bug. This design mimics the flow of work; putting the start of a bug’s lifecycle in the system at the start of the page. The top left of the screen then contains a table displaying information about all bugs in the system. This is in graph form, allowing users to easily get an idea about the state of the system (meaning all of the bugs at once) immediately upon viewing the page. Below it is the actual listing of all bugs, displaying their titles and priority level. Again, this presents users with the information needed to assess the current state of the system. By seeing which high-priority bugs there are, the number of bugs, etcetera, the user will be able to work on/review the bugs they need to without having to navigate. The two largest sections are to the right of these; one for details on the currently-selected bug (or details for a newly-created bug) and right below it one for comments. These are self-explanatory, however it should be mentioned that the comment section is made as large as the details section so as to emphasize the importance of users’ inputs. This is because in today’s culture user’s comments are devalued. We believe, however, that in a system such as this user input could easily be as valuable as the bug details themselves. This could hold information such as user experiences with/without the bug, speculation on the cause or effects of the bug, etcetera. All of this information is gathered in a readily available section to be reviewed with the bug itself.

These solutions address the characteristics of organization, categorization, and user collaboration that we had set out to solve. With this system, we hope users find their software bugs to be easily manageable and intuitive to address. The value in this is obvious: better/less-buggy software, quicker/easier development and support, and knowledge sharing to improve user-developer relations and awareness.