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Intro to Programming 9/10

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Final Project Documentation

Our final project evolved radically since it began. After brainstorming several ideas and concepts for our game, we narrowed it down to a few of the more well-developed and feasible ideas. From there, we decided to create a variant of the popular Windows default game, Minesweeper. Only later did we decide to give our game a theme based on our former freshman technology teacher, Mr. Maher. Finally, we had a complete concept for our game — no — experience: Mahersweeper.

The main tool that we utilized to execute our game was a two dimensional array. Although it was not something that we had used previously, it was crucial that we learned how to use it for the overall success of our game. This allowed us to refer to each block in the grid array as a separate location. The ability would make it easier to code where the mines are going to go and what blocks are being clicked on. From there, we used our knowledge of classes to create the “block” class. Within the class, we created methods to cause the mines to disappear and set the boolean to true if the block contained a mine. The other aspects of our code involved many “if statements” for the different conditions throughout the game. Another very important aspect of our code was how the number of mines surrounding a block was displayed. We used the combination of eight “if statements” to check if there was a mine in the surrounding eight boxes. At every “if statement,” if that specific condition was true, it would increase the variable “m” that we had created. After all the “if statements” ran, the variable “m” was displayed.

After we had achieved the basics of the game, we moved on to the more visual aspects. To better display our theme, we added a picture to the location of each mine, and we chose a color scheme that complemented the picture, to further enhance the game. The aspect that we are most proud of is the flagging feature. At first we were not sure how we were going to complete this task because it involved using the right click. After some research, we discovered the “mouse button” function and from there we were able to code it to do what we wanted. Research was also done to create the timer. We found the “millisecond” function in the Processing reference, which allowed us to make a functional timer.

In retrospect, we were able to come together and create a product that challenged each and every one of us. Problem solving was no challenge for this team. We maintained good communication and used each other as resources. Using each team member’s strengths to our advantage helped us recreate a classic PC game with a twist. Our coding and teamwork skills were tested, but we were able to succeed. We have learned skills and tactics that we will bring with us in the future.