Reema Kshetramade

SID: 205328402

Project 2 Report

1. One issue that came up when completing this project was figuring out how to make the program more efficient when handling several different cases of inputs. For instance, checking what range of money the fine was in, as well as checking for whether there was athletic fakery could become very complicated and result in inefficient code. However, I realized that creating variables for the amount of excess money paid in each range would allow me to check both what range the bribe was in, as well as whether there was athletic fakery, only once which made the code more efficient.

Another efficiency error I made was including the lower bound of the range in the if statement condition. I realized that this was unnecessary because if the value for the amount paid was not already greater than the lower bound then it would not have reached that portion of the if block.

1. Some test data that could test the program would be:

* A bribe of $40 thousand was paid (John Smith, 40, n)
  + This test would check the boundary case of 40 thousand and ensure that this case was handled by the program
* A bribe of $250 thousand was paid (Jack Brown, 250, n)
  + This test would check the boundary case of 250 thousand to make sure that this case was handled
* An empty string provided for the name (“”, 100, y)
  + This test would check if the error message is given correctly for this case
* A negative number is provided for the amount paid (Jack Black, -50, y)
  + This test would check if the error message is correct for when a negative amount is entered
* A lowercase ‘y’ is entered for the athletic fakery question with extra white space around it (Jane Blue, 50, “ y ”)
  + This test would check whether the program properly handles the case when there is not exactly a “y” or “n” entered
* A 0 is entered for the amount paid (George Brown, 0, n)
  + This test would check if the program provides a result for when the amount paid is 0 because 0 is not a negative number and a fine is calculated as long as the amount paid is not negative