Report – Project 2

1. The most notable obstacle that I had in Project 2, was trying to find out how to charge per minute and text past the limit without including all of the minutes and texts before the limit. The way I solved this problem was by creating minutesAfter and textAfter variables that add on the surplus charge but minus 500 minutes and 200 text messages respectively.

e.g:

int minsAfter = minsUsed - 500;

basePrice = basePrice +(0.45 \* minsAfter);

The other most notable problem I had was trying to include the $0.02 or $0.03 charges until the 400th text message and then on top of that add $0.11 without adding $0.02 or $0.03 post the 400th text message.

The way I solved this problem was simply to minus all the charges for the $0.02 or $0.03 after the text went over 400.

e.g

if (text > 400){

textAfter = text - 400;

basePrice = basePrice + (0.11 \* textAfter) - (0.02 \* textAfter); }

Test cases:

Minutes under 500, text messages under 200, normal name, and any month (450,175, Jahan Cherian, 12) – To test the base price function works.

Minutes above 500, text messages under 200, normal name, and any month (550,150, Jahan Cherian, 2) – To test the 45 cents per minute post 500 minutes works.

Minutes under 500, text messages above 200 but under 400, normal name, and month between October and May (475,234, Jahan Cherian, 4) – to test if the 3 cents per text message during normal seasons works.

Minutes under 500, text messages above 200 but under 400, normal name, and month between June and September (443,234, Jahan Cherian, 9) – to test if the 2 cents per text message during summer season works.

Minutes under 500, text messages above 400, normal name, and month between June and September (321,498, Jahan Cherian, 2) – to test if the 11 cents per text message during summer season works.

Minutes under 500, text messages above 400, normal name, and month between October and May (243,498, Jahan Cherian, 10) – to test if the 11 cents per text message during normal seasons work.

Minutes above 500, text messages above 400, normal name, and any month (543,498, Jahan Cherian, 8) – to test if the amalgamation of texts above 400 and minutes above 500 work.

Keep name as empty string – to test for the error message of no name.

Minutes under 0/Texts under 0 – for negative minutes and do the same for text messages to make sure the error messages work.

Month above 12 or below 1 – to text for invalid months.

All error messages together to make sure only one error message pops up, and that it’s the first error to be noticed that pops up.

Minutes used and text messages to be 0 exactly – to test to make sure that the base price still works if both are zero and an error message doesn’t pop up.