**CS31 Project2 Report**

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**Question 1: A brief description of notable obstacles you overcame. (In Project 1, for example, some people had the problem of figuring out how to work with more than one version of a program in Visual C++.)**

First of all, when I try to use “cin” give values to a string, it doesn’t accept space. Therefore, I use “getline” function to assign the values to strings.

Secondly, I forget to use “cin.ignore(10000, '\n')” when I use “getline” function, so the output is wrong.

Finally, boundary conditions (like $12500 as taxable income) can be very easily confused and lead to wrong results.

**Question 2: A list of the test data that could be used to thoroughly test your program, along with the reason for each test. You don't have to include the results of the tests, but you must note which test cases your program does not handle correctly. (This could happen if you didn't have time to write a complete solution, or if you ran out of time while still debugging a supposedly complete solution.)**

You must enter a name (“”, 2000, “no”, 2)

Test for empty input of name.

The taxable income must not be negative (“Jo Jo”, -10, “no”, 1)

Test for negative input of income.

You must enter an occupation (“Eric Wang”, 100, “”, 2)

Test for empty input of occupation.

The number of children must not be negative (“Eric Wang”, 1000, teacher, -3)

Test for negative input of number of children.

Jean Su would pay $1427.12 (“Jean Su”, 45678, nurse, 2)

Test for under $50000 taxable income.

Jean Su would pay $2538.85 (“Jean Su”, 77777, nurse, 4)

Test for special occupation tax.

Jean Su would pay $8656.38 (“Jean Su”, 156789, teacher, 20)

Test for special occupation beyond $125000 taxable income.

Bob Kai would pay $3010.00 (“Bob Kai”, 78000, “engineer”, 4)

Test for regular occupation between $50000 and $125000.

Bob Kai would pay $9425.00 (“Bob Kai”, 150000, 1000)

Test for regular occupation beyond $125000.

Jo Jo would pay $2200.00 (“Jo Jo”, 55000, “no”, 0)

Test for boundary conditions.

Jo Jo would pay $7100.00 (“Jo Jo”, 125000, “no”, 0)

Test for boundary conditions.

Jo Jo would pay $1800.00 (“Jo Jo”, 55000, “no”, 2)

Test for boundary conditions with kids.

Jo Jo would pay $7100.00 (“Jo Jo”, 125000, “no”, 2)

Test for boundary conditions with kids.