

1. The first immediate struggle I had was honestly just wrapping my head around where to start. Since we weren’t necessarily provided with a specific structure to follow for our code, I spent quite a bit of time visualizing how I wanted my code to look and run inside my head ( Normally just thinking about it helps, and something will click in my brain). It then hit me to seperate the project into what looked like 2 parts, the *Invalid Input* portion and the *Tax Calculation* portion.

Another problem I had was trying to figure out how to fix what would happen if I would input a string or character ( not a number) into the amount value. After careful thought and the help of professor Huang’s videos, the solution was simple- add…

**cin.clear();**

**cin.ignore(1000000, '\n');**

The Last major problem was coding the invalid input portion for the days and years. I originally made a mistake of using &&, which kept causing failures or wrong outputs. It took me a while to see my mistake, but I facepalmed myself when I realized I just had to use || instead of && because then I was basically saying that only output the error message if the day is both less than 1 and greater than 31 ( not possible), same with the years.

The rest of the project was rather simple, but time consuming.

1. **TEST CASES**

| california | Michigan |
| --- | --- |
| 20 | Twenty one |
| January | March |
| 12 | 15 |
| 2002 | 2000 |
| **In order to test “Invalid state!”** | **In order to test “Invalid amount!”** |

| Kansas | Maine |
| --- | --- |
| 200 | 20 |
| Febory | December |
| 13 | 99 |
| 2003 | 1997 |
| **In order to test “Invalid month!”** | **In order to test “Invalid day!”** |

| Arkansas | cAlIfOrNiA |
| --- | --- |
| 200 | -1 |
| July | -1 |
| 28 | -1 |
| -467 | -1 |
| **In order to test “Invalid year!”** | **Only marks first invalid statement (state)** |

| Alabama | Alabama |
| --- | --- |
| 20 | 20 |
| July | July |
| 14 | 15 |
| 2000 | 2000 |
| **In order to test Correct tax calculation** | **In order to test tax free date** |

| New Jersey | Wyoming |
| --- | --- |
| 100 | 89.76 |
| August | June |
| 30 | 1 |
| 2020 | 2020 |
| **More State total amount tests** | **Decimal Purchase Amount** |

| California California | Colorado |
| --- | --- |
| 200 | 9 |
| May | October October |
| 20 | 30 |
| 400 | 200 |
| **Invalid State test** | **Invalid Month test** |