CS Assignment 6

Part I

3.1:

(a) 5>=5.5: ans=0. This is false, 5 is less than 5.5, not greater than. (b) 20>20: ans=0, False, 20=20. (f) (7<=8) == (3/2==1): ans=0. This is false because 3/2 is not equal to 1.

3.4:

```
weight = input('Enter weight: ','s');
weightnum = str2num(weight);
if isempty(weightnum)
    disp('weight must be a number')
elseif weightnum <= 2
    shipping = 15.00;
elseif weightnum > 2 && weightnum <= 70
    shipping = 15.00 + 5 * (weightnum - 2);
elseif weightnum > 70 && weightnum <= 100
    shipping = 15.00 + 5 * (weightnum - 2) + 15.00;
else
    disp('Weight exceeds limit');
    return;
end
disp(['Cost of Shipping is: $', num2str(shipping)]);
```

3.11:

```
income=input('Enter income: ','s');
incomenum=str2num(income); %convert string to number
if isempty(incomenum)
    disp('Income must be a number');
elseif incomenum<0
    disp('No negative income');
elseif incomenum>=0 && incomenum<=6000
    tax=0;
elseif incomenum>=6001 && incomenum<=20000
    tax=.17*(incomenum-6000);
elseif incomenum>=20001 && incomenum<=50000
    tax=2380+.30*(incomenum-20000);
elseif incomenum>=50001 && incomenum<=60000
    tax=11380+.42*(incomenum-50000);
else
    tax=15580+.47*(incomenum-60000);
end
disp(['Tax is: $',num2str(tax)]);
MedicareLevy=.015*income; %Medicare Levy is 1.5% of income
disp (['Medicare Levy is: $',num2str(MedicareLevy)]);
TotalTax=tax+MedicareLevy;
disp(['Total Tax is: $', num2str(TotalTax)]);
```

Part II

I learned a lot about how to create a working interactive script. These scripts need to be very specific and thorough. I learned the importance of variable names and the importance of a specific code. I think it is useful to learn the importance of specificity in code writing because codes need to be extremely specific in order to run smoothly and completely.