CS132: Software Engineering
HW3: Testing

In this homework, we will practice how to generate test cases that cover system execution from different perspectives. There are 50pts in this homework, which will be scaled to 5pt.

For a binary search algorithm:

```
int binsearch (int X, int V[], int n){
    int low, high, mid;
    low = 0;
    high = n - 1;
    while (low <= high){
        mid = (low + high)/2;
        if (X == V[mid])
            return mid;
        if (x < V[mid])
            high = mid -1;
        else
            low = mid + 1;
    }
    return -1;
}
```

a. Draw the Control Flow diagram for this function (10pts)
b. Identify a set of linearly independent paths from the control flow (20pts)
c. Identify complete test cases (input, output) corresponding to the linearly independent paths. (20pts)

Note: Complete branch coverage should be achieved by your test cases.

Submission

The deadline of this homework is Dec 8th at 23:59. Please submit a .pdf file on Blackboard with name "CS132_HW3_YourName.pdf".