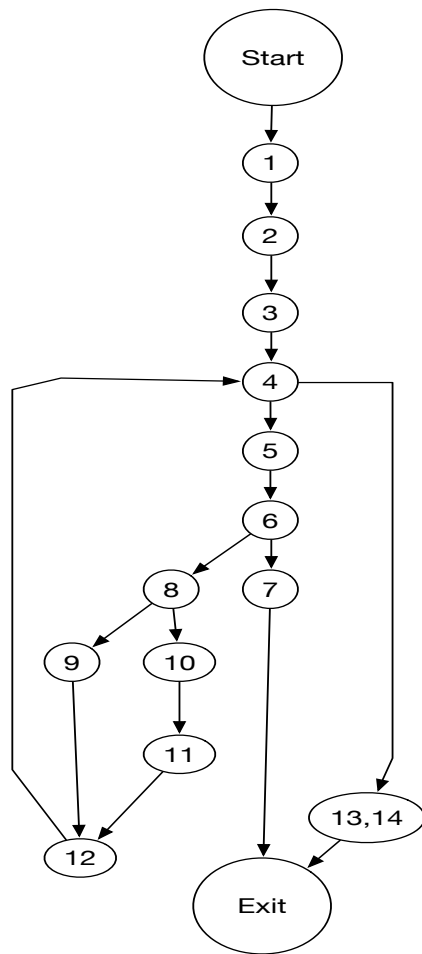


# CS 132 HW4 Solution

**1.**

```
int binsearch (int X, int V[], int n){  
1      int low, high, mid;  
2      low = 0;  
3      high = n - 1;  
4      while (low <= high) {  
5          mid = (low + high) /2;  
6          if (X == V[mid])  
7              return mid;  
8          if (X < V[mid])  
9              high = mid -1;  
10         else  
11             low = mid +1;  
12     }  
13     return -1;  
14 }
```

**a**



**b**

Path 1: 1 2 3 4 13 14 (optional)

Path 2: 1 2 3 4 5 6 7

Path 3: 1 2 3 4 5 6 8 9 12 4 13 14

Path 4: 1 2 3 4 5 6 8 10 11 12 4 13 14

**c**

Base on (b) and the inputs. We accept all correct solutions.