

CS 6501 - Spring 2020 - Problem 5**Name:** _____

Assigned: February 6, 2020

Due: February 13, 2020

20 points

Please submit your solution for the following program to Collab by the date due.

Given the following C program,

```
main()
{
    int sum, i, j, k;

1.    sum = 0;
2.    k = 4;
2.    i = 1;
3.    while (i <= 5) {
4.        scanf("%d",&j);
5.        if (j < 0)
6.            break;
7.        sum = sum + j;
8.        k = j + i;
9.        if (sum > 10)
10.           continue;
10.       i = i + 1;
11.    }
12.    printf("i is %d", i, "k is %d", k);
13.    printf("sum is %d", sum);
}
```

1. compute the statement-based CFG
2. construct the control-dependence graph
3. construct the program-dependence graph (PDG)
4. using the CFG, perform slicing on statement 12 for i; show intermediate sets for each iteration.
5. using the PDG, perform slicing on statement 12 for i. Show the steps.