

Name (PRINTED): _____

Student ID #: _____

Section # (or TA's: _____
name and time)

CMSC 106

Quiz #4

Fall 2007

1. [10 pts.] Write the complete C program which request two integers from the user. You may assume that the user will type in exactly integers that are between 1 and 20 inclusive. You then need to have the program draw a rectangle. The first integer given by the user tells the width (side to side) and the second tells the height (top to bottom). Draw the rectagle using the # character to make a completely filled in rectangle. For example, if the numbers given are 3 and 4 (in that order) the application would draw:

```
###  
###  
###  
###
```

```
#include <stdio.h>
```

```
int main(){  
    int width, height, x, y;  
    printf("Please enter the width and height:");  
    scanf("%d %d", &width, &height);  
  
    for(y = 0; y < height; y++){  
        for(x = 0; x < width; x++){  
            printf("#");  
        }  
        printf("\n");  
    }  
  
    return 0;  
}
```

(over)

2. [10 pts.] Give the exact output of the following C loop. If it never executes or has no output then write “none”. If it is an infinite loop then show its first three lines of output, then write “infinite”.

```
int x, y;
for (x=4; x > 2; x--)
{
    printf("***%d***\n",x);
    y = 1;
    while (y < x)
        printf("%d ",y++);
    printf("\n");
}
```

4

1 2 3

3

1 2

3. [20 pts.] Write a complete C program which will read a list of integers from a file (assuming the program was run with input redirection). It will stop reading when it sees a zero. It will find the product of the integers read before the 0.

```
% more in.file
4 2 -1 3 0 9 1
```

```
% a.out < in.file
product = -24
```

Your program need not contain any comments but should be written **neatly** and use good style and logical indentation.

```
#include<stdio.h>
```

```
int main(){
    int input = 1, total = 1;
    do{
        scanf("%d", &input);
        if(input != 0)
            total *= input;
    }while(input != 0);

    printf("prouduct = %d\n", total);

    return 0;
}
```