

CS1428 Lab 5: Fall 2020

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Lab Section: Lab 17

Type your name at the top of this sheet. Answer the following questions and turn in this sheet before the end of class. You may use the pre-lab, your book, or internet resources to assist you.

1. (20 pts) Predict the output for each code block below.

```
for (int i = 3; i > 0; i--){  
    cout << "Hola" << endl;  
}
```

Output:

```
int count = 12;  
for(int i = 0; i < 5; i++) {  
    count -= i;  
    if (i < count)  
        cout << "count = " << count << endl;  
}
```

Output:

count = 12
count = 11
count = 9
count = 6
count = 2

```
for (int i = 0; i < 2; i++) {  
    for (int k = 0; k < 3; k++) {  
        cout << i << " " << k << endl;  
    } //end inner for loop  
} //end outer for loop
```

Output:

0 0
0 1
0 2
1 0
1 1

```
for (int i = 2; i > 0; i--) {  
    for (int k = i; k > 0; k--) {  
        cout << k << endl;  
    } //end inner for loop  
} //end outer for loop
```

Output:

2
1
1

2. (50 pts) Modify the provided code to create a program that asks the user for a positive integer value. The program will output a rectangle with that many rows. You will also ask the user for another integer number. Row numbers that are evenly divisible by this number should be printed with a *. All other rows will print with a #.

- The program should use a for loop to print the ASCII art.
- Each row will have 10 characters.
- Your output needs to be formatted as shown below.
- Your program should only accept numbers 1 – 25. In other words, you cannot print more than 25 rows and the multiple should also be in this range.

Sample run 1:

Enter the number of rows you would like to print (1-25): 12

Enter the multiple: 2

```
#####
*****
#####
*****
#####
*****
#####
*****
#####
*****
#####
*****
```

Sample run 2:

Enter the number of rows you would like to print (1-25): 7

Enter the multiple: 3

```
#####
#####
*****
#####
#####
*****
#####
```

Sample run 3:

Enter the number of rows you would like to print (1-25): 30

Enter the multiple: 2

ERROR: number of rows and multiple should be in the range 1-25

WRITE your name in the authorship comments at the top of your program.

UPLOAD this pdf with your answers filled in and your source code as lab5.cpp to Canvas.