**CS31 Homework2**

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1. **What is the output produced by the following program segment?**

endlendl

grendel

1. **In a brief, simple English sentence, state what this program does (e.g. "It prints a circle.").**

It prints a right triangle using “#”, and on both sides of the triangle, the number of “#” is equal to the input number “side”. In other words, for n <= “side” rows, n “#” symbols are printed on the nth row.

1. **Copy the program in problem 2 and change it so that for any input number, the changed program produces exactly the same output as the original, but the changed program uses a while loop instead of a for loop for the inner loop.**

#include <iostream>

using namespace std;

int main()

{

int side;

cout << "Enter a number: ";

cin >> side;

for (int i = 0; i < side; i++)

{

int j = i;

while (j >= 0)

{

j--;

cout << "#";

}

cout << "\n";

}

}

1. **Assume codeSection has been previously declared as an int and given as its value the number of a section of the California Penal Code. Write a switch statement that for any value of codeSection, produces exactly the same output as the following if statement.**

switch(codeSection)

{

case 281:

cout << "bigamy";

break;

case 321:

cout << "selling illegal lottery tickets";

break;

case 322:

cout << "selling illegal lottery tickets";

break;

case 383:

cout << "selling rancid butter";

break;

case 598:

cout << "injuring a bird in a public cemetery";

break;

default:

cout << "some other crime";

}