Brian Han-Wei Chang

UID: 405-142-813

CS 31 - Project 2 Accompanying Homework

1. What is the output produced by the following program segment? Don't just run it — trace through it and figure it out by hand (which is a skill you'll need for the exams).

string endline = "endl";

//assigns the string “endl” to the variable “endline”

cout << "endl";

//prints “endl” on screen

cout << endline;

// prints “endl” because it was assigned to “endline” which was called by cout.

cout << endl;

//ends current line, next line of text will appear on the following line.

cout << "endline";

//Prints “endline”.

2. In a brief, simple English sentence, state what this program does

The program prints a “forward slash” diagonal line of hashtags with as many rows as “len” which in the integer you input.

Ie. if len == 4

Output:

#

#

#

#

3. 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.

using namespace std;

int main()

{

int len;

cout << "Enter a number: ";

cin >> len;

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

{

int j = i+1;

while (j < len) {

cout << " ";

j++;

}

cout << "#" << endl;

}

}

4. Copy the program you wrote for problem 3 and change it so that for any input number, it produces exactly the same output as the original, but uses a do-while loop instead of a for loop for the outer loop

int main()

{

int len;

cout << "Enter a number: ";

cin >> len;

int i = 0;

do{

int j = i+1;

while (j < len) {

cout << " ";

j++;

}

i++;

cout << "#" << endl;

}while(i < len);

}

5. Write a switch statement that for any value of weekday, produces exactly the same output as the following if statement.

switch(weekday)

{

case 1:

cout << "rainy days and mondays get me down";

break;

case 2:

cout << "ruby tuesday";

break;

case 6:

case 7:

cout << "wonderful weekend";

break;

default:

cout << "regular day";

}