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";

cout << "endl";

cout << endline;

cout << endl;

cout << "endline";

The output produced by the following program segment will be:

endlendl

endline

1. Consider the following program:

In a brief, simple English sentence, state what this program does (e.g. "It prints a picture of an aqueduct."). Again, figure this out by hand.

This program prints “Enter a number: “, and then depending on that number, prints “#” for the amount of times of the value of the inputted number (len).

#include <iostream>

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) {

            j++;

        cout << " "; }

        cout << "#" << endl;

        }

}

#include <iostream>

using namespace std;

int main()

{

int len;

cout << "Enter a number: ";

cin >> len;

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

{

for (int j = i+1; j < len; j++)

{

cout << " ";

}

cout << "#" << endl;

}

}

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.

5. Assume weekday has been previously declared as an int and given a meaningful value. Write a switch statement that for any value of weekday, produces exactly the same output as the following if statement.

Switch 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";

}

#include <iostream>

 using namespace std;

 int main() {

 int len;

 cout << "Enter a number: ";

 cin >> len;

     int i = 0 ;

     do {

if(len<0)

             break;

        int j = i+1;

            while(j<len) {

            cout << " ";

            j++;}

            cout << "#" << endl;

            i++;

            }while(i<len);

 }

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

If-Else statement:

if (weekday == 1)

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

else if (weekday == 2)

cout << "ruby tuesday";

else if (weekday == 6 || weekday == 7)

cout << "wonderful weekend";

else

cout << "regular day";