# Program 1:

```cpp
// fahren.cpp
// demonstrates cin, newline
#include <iostream>
using namespace std;

int main()
    {
    int ftemp;   //for temperature in fahrenheit

    cout << "Enter temperature in fahrenheit: ";
    cin >> ftemp;
    int ctemp = (ftemp-32) * 5 / 9;
    cout << "Equivalent in Celsius is: " << ctemp << '\n';
    return 0;
    }
```

# Program 2:

```cpp
// circarea.cpp
// demonstrates floating point variables
#include <iostream>                      //for cout, etc.
using namespace std;

int main()
    {
    float rad;                           //variable of type float
    const float PI = 3.14159F;           //type const float

    cout << "Enter radius of circle: ";  //prompt
    cin >> rad;                          //get radius
    float area = PI * rad * rad;         //find area
    cout << "Area is " << area << endl;  //display answer
    return 0;
    }
```
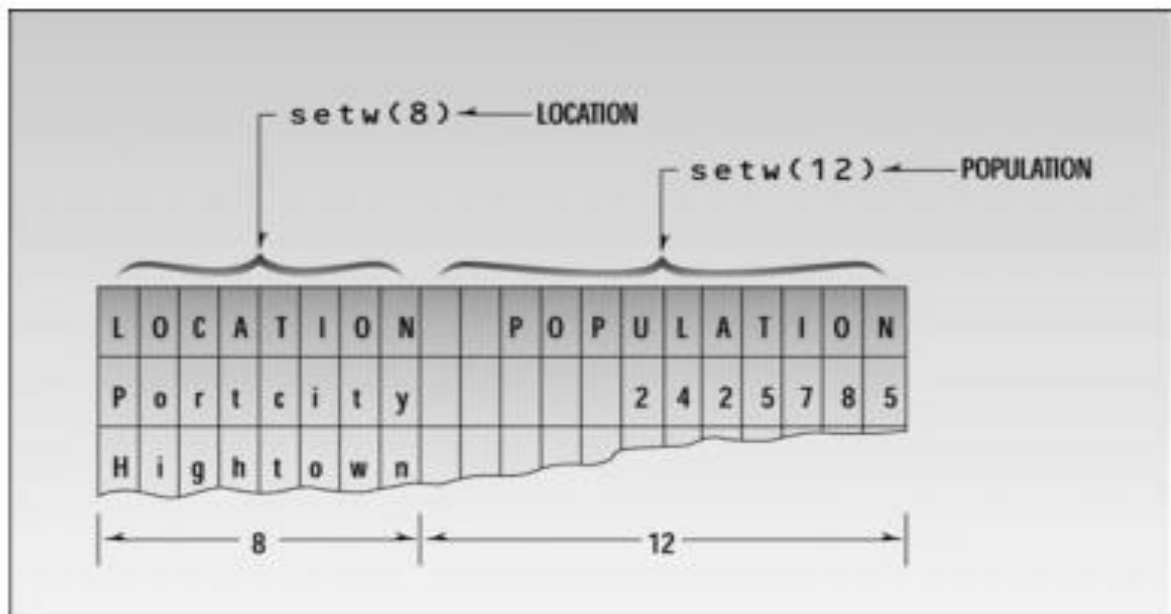
# Program 3:

```cpp
// width2.cpp
// demonstrates setw manipulator
#include <iostream>
#include <iomanip>       // for setw
using namespace std;

int main()
    {
    long pop1=2425785, pop2=47, pop3=9761;

    cout << setw(8) << "LOCATION" << setw(12)
         << "POPULATION" << endl
         << setw(8) << "Portcity" << setw(12) << pop1 << endl
         << setw(8) << "Hightown" << setw(12) << pop2 << endl
         << setw(8) << "Lowville" << setw(12) << pop3 << endl;
    return 0;
    }
```

## Program 4:

```cpp
// sqrt.cpp
// demonstrates sqrt() library function
#include <iostream>              //for cout, etc.
#include <cmath>                 //for sqrt()
using namespace std;

int main()
   {
   double number, answer;        //sqrt() requires type double

   cout << "Enter a number: ";
   cin >> number;                //get the number
   answer = sqrt(number);        //find square root
   cout << "Square root is "
     << answer << endl;          //display it
   return 0;
   }
```