

## Example 1 : Programming Style and Documentation

```
/*
 * cricle.cpp
 *
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 * Programming Assignment Number  1
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 *
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 *
 * ** This program computes the
 * Circumference, Area , and Diameter of a circle.  **
 *
 */

#include <iostream>
#include <cmath>
#include <iomanip>
using namespace std;

int main()
{
    // Declare variables and constants.
    const double PI = 3.14159; // Value of pi
    double radius;           // Radius of circle entered by user.
    double area;            // Area of the circle.
    double circumference;   // Circumference of the circle.
    double diameter;       // Diameter of the circle.

    // Get radius from the user.
    cout << "\nEnter the radius of the circle: ";
    cin >> radius;

    // Calculate area and circumference.
    area = PI * pow(radius , 2.0);
    circumference = 2*PI*radius;
    diameter = sqrt( 4 * (area / PI) );
}
```

```
// Display area , circumference , and diameter ;

cout <<fixed<<setprecision (2)
    << "\nThe Area is " << area
    << "\nThe Circumference is " << circumference
    << "\nThe Diameter is " << diameter
    << "\n\n\n\n";

return 0;
}
```