

LAB 3: Variables and Constants

Lab 3.1 – Declaring Variables

1. Create a new C++ program, go to File/New/Source File.
2. Copy and paste the incomplete C++ source code as per below:

```
// This program calculates a circle's circumference and area
// when radius of the circle is keyed in by the user
// Student's name:
// Date:
#include <iostream>
using namespace std;

int main()
{
    const insert data type PI = 3.142;
    const insert data type RADIUS = 2.5;
    insert data type CircleArea;           // define variable CircleArea
    insert data type _2pi_r;             // define variable circumference
    _2pi_r = 2 * PI * RADIUS;           // calculate circumference
    CircleArea = PI * RADIUS * RADIUS; // calculate area

    cout << "The circle's circumference is " << _2pi_r << endl;
    cout << "The circle's area is " << CircleArea << endl;

    return 0;
}
```

3. Complete the code with **appropriate** data type for the listed variables and constants. Save the file.
4. *Compile* and *Run* your program. If there's any compile error, fix the error and *re-compile* the codes.
5. Observe the displayed output.