

Chapter 3

Write programs for the following and test to make sure they work. Please follow the book's guidelines or my style guidelines to write code.

1. Consider the following program in which the statements are in the incorrect order. Rearrange the statements so that the program prompts the user to input the height and the radius of the base of a cylinder and outputs the volume and surface area of the cylinder. Format the output to two decimal places.

```
#include <iomanip>
#include <cmath>
int main()
{
    double height;
    cout << "Volume of the cylinder = "
        << PI * pow(radius, 2.0)* height << endl;
    cout << "Enter the height of the cylinder: ";
    cin >> radius;
    cout << endl;
    return 0;
    double radius;
    cout << "Surface area: "
        << 2 * PI * radius * height + 2 * PI * pow(radius, 2.0)
        << endl;
    cout << fixed << showpoint << setprecision(2);
    cout << "Enter the radius of the base of the cylinder: ";
    cin >> height;
    cout << endl;
#include <iostream>
const double PI = 3.14159;
```

2. Three employees in a company are up for a special pay increase. You are given a file, say Ch3_Ex6Data.txt, with the following data:

Miller Andrew 65789.87 5

Green Sheila 75892.56 6

Sethi Amit 74900.50 6.1

Each input line consists of an employee's last name, first name, current salary, and percent pay increase. For example, in the first input line, the last name of the employee is Miller, the first name is Andrew, the current salary is 65789.87, and the pay increase is 5%. Write a program that reads data from the specified file and stores the output in the file Ch3_Ex6Output.dat. For each employee, the data must be output in the following form: firstName lastName updatedSalary. Format the output of decimal numbers to two decimal places.