CS1428 Lab 11

# Name: Section:

1. (35pts) What is the standard output of the following program?

#include <iostream>

using namespace std;

void firstFunction(double, int);

void secondFunction(int &, double);

int W = 2;

int main()

{

int x = 0;

double y = 1.5;

cout << x << “ “ << y << “ “ << W << endl;

firstFunction (y, x);

cout << x << “ “ << y << “ “ << W << “ “ << endl;

secondFunction (x, y);

cout << x << “ “ << y << endl;

return 0;

}

void firstFunction(double x, int y)

{

cout << x << “ ” << y << endl;

x = 6.8;

y = 7.6 ;

W \*= 5;

cout << x << “ ” << y << endl;

}

void secondFunction(int &a, double b)

{

cout << a << “ ” << b << endl;

a = 100 \* W;

b = 67.4;

cout << a << “ “ << b << endl;

}

1. (65pts) Write a C++ program (**lab11\_01.cpp**) that uses the following arrays:

* **empId**: an array of six (6) integers to hold employee identification numbers.
* **empName**: an array of six (6) strings to hold employee Name.
* **hours**: an array of six (6) doubles to hold the number of hours worked by each employee.
* **payRate**: an array of six (6) doubles to hold each employee’s hourly pay rate.
* **wages**: an array of six (6) doubles to hold each employee’s gross wages.

The program should relate the data in each array through the subscripts.

For example, the number in element 0 of the hours array should be the number of hours worked by the employee whose identification number and name are stored in element 0 of the empId and empName arrays respectively. That same employee’s pay rate should be stored in element 0 of the payRate array.

The program should open a file (**E\_PayRoll.txt**) containing a list of employee identification numbers, names and their respective pay rate.

The program should read the identification numbers and names from the file **E\_PayRoll.txt** into the **empId** and **empName** arrays and the pay rate into the **payRate** array.

It should then display each employee name and identification number and ask the user to enter that employee’s hours. The employee’s hours entered by the user should be stored in the **hours** array.

The gross wage should then be calculated for each employee (gross wage = **hours \* pay Rate**) and should be stored in the **wages** array.

After the data has been entered for all employees, the program should write all of this information in table form with appropriate table headings, row headings and/or column headings to an output file **lab11\_EmpPayRoll.txt**.

**Input Validation:** Do not accept negative values for hours .

Use functions for all major processing:

* A function that takes four (4) arguments: (3 Arrays and an Input filestream variable). The function opens the file and reads the employee identification numbers, names and pay rate into their respective arrays.
* A function that accepts 3 arguments: (3 Arrays). It should display each employee name and identification number and ask the user to enter that employee’s hours.
* A function that accepts 3 arguments: (3 Arrays.) It should compute the gross wage for each employee.

**Output Sample:**

**Employee ID Hours Worked Pay Rate Wages Earned**

**Upload** your source code **lab11.cpp** and attach a print out to this worksheet.