

Project 1

Due: February 23, 2009

Program Description

The ACME corporation has hired you to write a program to do their weekly payroll. Your program must compute each employee's weekly pay as well as the sum of all the employee's pay for that week.

For each employee, your program prompts the user to enter the employee's hourly pay rate and the number of hours worked for the week. It then computes and outputs the employee's net pay for the week and adds that number to the total. After processing each employee, the program then asks the user whether there is another employee to process. When the user indicates that there are no more employees, the program then outputs the total pay for all employees and exits.

When computing the weekly pay for each employee, you must factor in overtime. If an employee works more than 40 hours in a week then those additional hours are overtime and are worth one and half times the base pay rate. Do not consider taxes in your computation.

Your program must output dollar amounts with two digits after the decimal point. Make sure to use floating-point (`double`) variables where appropriate in this program.

Suggestions

I strongly suggest that you write your program incrementally. Start off with the smallest program that compiles and runs correctly, then add features one at a time until the program is complete. For this project, I would recommend that write your program in the following four steps:

1. Write a program that computes the weekly pay for a single employee, without overtime.
2. Modify that program to factor overtime into the computation.
3. Add a loop to that program, so that it can process multiple employees.
4. Add code to that program that computes the sum of all the employees' pay.

Grading

Your program will be graded based on the following criteria:

- Compiles using the `g++` compiler on `loki`
- Outputs correct results
- Fulfills all project requirements
- Source code is readable and properly formatted
- Source code is well commented

Projects turned in late will be penalized 5% for each day they are late. If turning the project in late, notify the instructor via email.

Submitting the Project

You will submit the project using Subversion, similar to a lab assignment. Create a directory named `Project_1` inside your `cs23021_student` directory and place your program's source file (which should be called `payroll.cpp`) in that directory:

```
> cd
> cd cs23021_student
> svn mkdir Project_1
> svn commit -m "Created Project 1 directory."
> cd Project_1
> touch payroll.cpp
> svn add payroll.cpp
> svn commit -m "Started payroll program."
```

When you are finished with the project, make sure all files are properly committed by checking the repository through the web browser interface.