

Summer Job Program

Problem/Instructions

Write a program that calculates a weekly wage, based on an hourly payrate and how many hours were worked; then amounts for various categories of spending need calculated, along with how much of the weekly pay is leftover.

- Tax = 15%
- Shopping = 20%
- Entertainment = 10%
- Savings = 25%
- Remainder = 30% (or you could subtract to find what's left)

Considerations/Planning

Recall that an algorithm is the method for solving a problem. Think of it as the set of steps that you need to take to come up with a solution. Some considerations that you should think about:

What is an appropriate title and description for this program?

Summer Job Wage Calculator

What data needs to be collected from the user?

First Name

Last Name

Hourly Payrate

Hours Worked

What calculations need to be done? (And in what order? Does it matter?)

Order Prescribed is not imperative with this method.

Hourly Payrate * Hours Worked = Weekly Wage

Weekly Wage * 0.15 = TaxWithholdings

Weekly Wage * 0.20 = ShoppingWithholdings

Weekly Wage * 0.10 = EntertainmentWithholdings

Weekly Wage * 0.25 = SavingsWithholdings

Weekly Wage * 0.30 = Remainder

What is a mathematical example I can work through (and later used to test) these calculations to ensure they are correct?

Hourly Payrate = 4

Hours Worked = 25

This should lead to

TaxWithholdings = 15

ShoppingWithholdings = 20

EntertainmentWithholdings = 10

SavingsWithholdings = 25

Remainder = 30

What variables and constants would be needed for this program, as well as appropriate names for them?

Variable for hourly wage – hourlyWage

Variable for hours worked – hoursWorked

What kind of output do we want? How should it be formatted?

Algorithm

Plan the algorithm here (exactly what your program needs to do and in what order each step needs to happen).

<insert algorithm here>

```
//Accept input via cin for hourly wages, pay rate, and name
```

```
//Multiply the input to create the WeeklyWage variable
```

```
//Possible memory optimization here by removing the WeeklyWage variable, but at the cost of CPU cycles.
```

```
//Print the User's name
```

```
//Print the Wage
```

```
//have a bunch of cout statements that do all the math
```

```
// I.e : cout << "Tax: " << WeeklyWage*0.15
```

Code

Once the algorithm is complete, then create a new Project called → **SummerJob1** and paste the algorithm above in the form of comments into the `main` function of your code.

Test Your Program

Test your program with the following input data and verify the output shown below:

Input:	
First name	Mickey
Last name	Mouse
Payrate	\$13.50
Hours worked	35 hours

Output should look like:

```
Name: Mickey Mouse  
Wages: $472.5  
Taxes: $70.875  
Shopping: $94.5  
Entertainment: $47.25  
Savings: $118.125  
Remainder: $141.75
```

Review Your Code

Review your code to make sure it:

- Uses appropriate comments to document parts of program
- Is indented properly
- Makes good use of white space (leave blank lines between sections)