*Assignment 1 - 2*

*Instructor: Faisal Khan*

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1-Use Documentation Comments where needed.

2-In your project src folder add this word document with all your group members names, having the screen shots of your output with source code after each question.

2-Right Click on your Project Folder in Eclipse, Copy Option is available. Create a copy of the Project and upload the zipped folder using Moodle.

|  |  |
| --- | --- |
| **Assignment 1** | **10** |

Write a program that declares the following:

• a String variable named name

• an int variable named age

• a double variable named annualPay

Use the Scanner class to take the user input for these variables and

store your age, name, and desired annual income as literals in these variables.

The program should display these values on the screen in a manner similar to the following:

My name is Joe Mahoney, my age is 26 and I hope to earn $100000.0 per year.

**Source Code:**

package com.lcit.assignments;

import java.util.Scanner;

public class Assignment\_1 {

/\*\*

\* Assignment 1:

\* This program prints a string in the console after taking 3 variables from the user: a String variable

\* is saved as the person's name, an int containing the person's age and finally, a double variable containing

\* the expected salary. The output String is formatted using the printf method.

\* \*/

public static void main(String[] args) {

final String OUTPUT = "My name is %s, my age is %d, and I hope to earn $%,.2f per year";

String name;

int age;

double annualPay;

Scanner input = new Scanner(System.in);

System.out.print("Enter your name: ");

name = input.nextLine();

System.out.print("Enter your age: ");

age = input.nextInt();

System.out.print("Enter your desired annual income: ");

annualPay = input.nextDouble();

System.out.printf(OUTPUT, name, age, annualPay);

input.close();

}

}

**Output:**

A computer screen shot of a computer screen

Description automatically generated

|  |  |
| --- | --- |
| **Assignment 2** | **10** |

**Program**

Create a program to calculate pay

1. Will has asked that you create a Pay Calculator program, with the following

variables at minimum, you can add more variables if needed.

**Components**

* 1. HoursWorked
  2. PayRate
  3. BonusPercentage
  4. TaxPercentage
  5. BonusHours
  6. finalPay
  7. dialog box - input
  8. dialog box - output

**Functionality**

The program will ask for hours worked, bonus hours, then calculates Will’s final pay

1. Print Will’s final pay

**Source Code:**

package Assignment\_1\_2;

import java.io.\*;

import javax.swing.JOptionPane;

/\*\*

\* This class generates an employee paystub based on user input and writes it to

\* a file.

\*/

public class Assignmnet\_2 {

/\*\*

\* The main method that calculates pay and writes the paystub to a file.

\*

\* @throws IOException Signals that an I/O exception has occurred

\*/

public static void main(String[] args) throws IOException {

// Creates a PrintWriter to write the paystub to a file named "Paystyb.txt"

PrintWriter outputFile = new PrintWriter("Paystyb.txt");

// Format for the paystub

final String OUTPUT = "Employee Paystub\n\n" + "Employee\n"

+ "--------------------------------------------------------------\n" + "%-20s\n" + // name address

"%s\n\n" + String.format("%-25s %-10s %-10s %-10s\n", "Earnings and Hours", "Qty", "Rate", "Current")

+ "--------------------------------------------------------------\n"

+ String.format("%-25s", "Solo Hourly Rate") + " %,-10.2f $%,-10.2f $%,.2f\n"

+ String.format("%-25s", "Bonus 10%%") + " %,-10.2f $%,-10.2f $%,.2f\n"

+ String.format("%-25s", "Holiday Rate") + " %,-10d $%,-10.2f $%,.2f\n"

+ " -------------------------------------\n" + String.format("%-25s", "")

+ " %,-22.2f $%,.2f\n" + "Taxes\n" + "--------------------------------------------------------------\n"

+ String.format("%-48s", "CPP - Employee") + "-$%,.2f\n" + String.format("%-48s", "EI - Employee")

+ "-$%,.2f\n" + String.format("%-48s", "Federal Income Tax") + "-$%,.2f\n"

+ " ----------------\n" + String.format("%-49s", "Net Pay")

+ "$%,-10.2f\n";

// Constants and variables for calculations

final double SOLO\_PAY\_RATE = 18.50, HOLIDAY\_PAY = 151.32, BONUS\_PCT = 0.10, CPP\_EMPLOYEE = 0.0595,

EI\_EMPLOYEE = 0.0163, FEDERAL\_TAX = 0.115;

double hoursWorked, bonusHours, regularPay, bonusPay, holidaysPay, earnings, ccpTax, eiTax, federalTax, netPay;

int holidays;

// Obtains user input for hours worked, bonus hours, and holidays

hoursWorked = Double.parseDouble(JOptionPane.showInputDialog("Hours worked"));

bonusHours = Double.parseDouble(JOptionPane.showInputDialog("Bonus Hours worked"));

holidays = Integer.parseInt(JOptionPane.showInputDialog("Holidays"));

// Calculating various pays and earnings

regularPay = hoursWorked \* SOLO\_PAY\_RATE;

bonusPay = bonusHours \* SOLO\_PAY\_RATE \* BONUS\_PCT;

holidaysPay = holidays \* HOLIDAY\_PAY;

earnings = regularPay + holidaysPay + bonusPay;

// Calculating taxes

ccpTax = earnings \* CPP\_EMPLOYEE;

eiTax = earnings \* EI\_EMPLOYEE;

federalTax = earnings \* FEDERAL\_TAX;

// Calculating net pay

netPay = earnings + bonusPay - ccpTax - eiTax - federalTax;

// Printing paystub details to the console

System.out.printf(OUTPUT, "Will", "347 Lawson Rd, Scarborough, ON", hoursWorked, SOLO\_PAY\_RATE, regularPay,

bonusHours, SOLO\_PAY\_RATE, bonusPay, holidays, HOLIDAY\_PAY, holidaysPay,

hoursWorked + holidays + bonusHours, earnings, ccpTax, eiTax, federalTax, netPay);

// Writing paystub details to the output file

outputFile.printf(OUTPUT, "Will", "347 Lawson Rd, Scarborough, ON", hoursWorked, SOLO\_PAY\_RATE, regularPay,

bonusHours, SOLO\_PAY\_RATE, bonusPay, holidays, HOLIDAY\_PAY, holidaysPay, hoursWorked + holidays,

earnings, ccpTax, eiTax, federalTax, netPay);

outputFile.close();

System.exit(0);

}

}

**Output:**

A screenshot of a computer

Description automatically generated

A screenshot of a computer

Description automatically generated

A screenshot of a computer

Description automatically generated