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Lab 1

Task 1

Start

Display “How many hours did you work?”.

Input hours.

Display “How much do you get paid per hour?”.

Input rate.

If the number of hours completed is less than 40.

Multiply Hours by Rate and set as the variable pay.

If the number of hours worked is greater than 40.

Subtract 40 from Hours, then Multiply by Rate\*1.5

Add 40 \* Rate to the total and set as the variable pay.

Display the variable pay.

End

Task 2

|  |  |  |  |
| --- | --- | --- | --- |
| Hours | Rate | Pay(Hand calculated) | Pay(Program Result) |
| 38 | 12.50 | 475 | 475 |
| 40 | 12.50 | 500 | 500 |
| 47 | 12.50 | 631.25 | 631.25 |

Task 2b

//This program calculates the user's gross pay  
  
import java.util.Scanner; //to be able to read from the keyboard  
  
public class Pay  
{  
 public static void main(String [] args)  
 {  
 //create a Scanner object to read from the keyboard  
 Scanner keyboard = new Scanner(System.in);  
  
 //identifier declarations  
 double hours; //number of hours worked  
 double rate; //hourly pay rate  
 double pay; //gross pay  
 double taxes;  
 double gross;  
  
 //display prompts and get input  
 System.out.print("How many hours did you work? ");  
 hours = keyboard.nextDouble();  
 System.out.print("How much do you get paid per hour? ");  
 rate = keyboard.nextDouble();  
  
 //calculations  
 if(hours <= 40)  
 pay = hours \* rate;  
 else  
 pay = (hours - 40) \* (1.5 \* rate) + 40 \* rate;  
 taxes = pay \*.2;  
 gross = pay \*.8;  
  
 //display results  
 System.out.println("You earned $" + pay);  
 System.out.println("You netted $" + gross);  
 System.out.println("You paid in taxes $" + taxes);  
 }  
}

How many hours did you work? 10  
¼¼§ÏHow much do you get paid per hour? 10  
ÏÏ§ÏYou earned $100.0  
ÏÏ§ÏYou netted $80.0  
ÏÏ§ÏYou paid in taxes $20.0

Task 3

//This program calculates the total price which includes sales tax  
  
import java.util.Scanner;  
  
public class SalesTax  
{  
 public static void main(String[] args)  
 {  
 //identifier declarations  
 final double TAX\_RATE = 0.055;  
 double price;  
 double tax;  
 double total;  
 String item;  
   
 //create a Scanner object to read from the keyboard  
 Scanner keyboard = new Scanner(System.in);  
  
 //display prompts and get input  
 System.out.print("Item description: ");  
 item = keyboard.nextLine();  
 System.out.print("Item price: $");  
 price = keyboard.nextDouble();  
   
 //calculations  
 tax = price \* TAX\_RATE;  
 total = price + tax;  
   
 //display results  
 System.out.print(item + " $");  
 System.out.println(price);  
 System.out.print("Tax $");  
 System.out.println(tax);  
 System.out.print("Total $");  
 System.out.println(total);  
 }  
}

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Item | Price | Tax | Total(calculated) | Total(output) |
| sdegr | $10.0 | $0.55 | $10.55 | $10.55 |
| grftjdthj | $45.0 | $2.475 | $47.48 | $47.475 |

Display

Pay

Multiply Hours Times Rate

Set as Pay

(Hours -40)\*rate\*1.5 + 40\*rate

Set as Pay

Hours <= 40

“How much paid per hour?” ::Rate

“How many hours did you work?: : Hours

Hours =0

Rate = 0