Name of the Course : Complete Java SE8 Developer Bootcamp

Level : Easy

Tool Stack : Java8 and Junit4

Problem Statement : Provide a code solution to understand the use of while loop over for loop, also usage of decimal formatting.

Description : ABC & Company has civil construction business. At the same time company’s constructions are going on in different locations/sites. The company hires several casual workers on daily wage basis. So the company needs to calculate site wise daily wage expenses as well as average daily wage for that site. You need to develop an application to perform all tasks. The application first accepts the number of workers in that particular site. Minimum value should be 5 otherwise error message “Wrong workers number” and stop the application. It then accepts the daily wage of each worker in that site in double/float. If any one’s wage entry is not between 100.00 and 250.00 then the system will ask to re-enter a valid wage value for that worker. No worker’s wage can be skipped. Finally display the total and average wage for that site. Both the values should be in round off 2 decimal place value. Create class Main with two static functions.

1. public String convertToTwoDecimalPlace(double value). It will accept a double/float value and return as a String with two decimal place values.

2. pubic static void main method, for accepting number of workers at a site, wage figures of each worker. If the rules for input are violated then display error messages. Finally it will show total wage expense and average wage for a site in two decimal place value.

Code: **import** java.text.DecimalFormat;

**import** java.util.Scanner;

**public** **class** Main {

**public** **static** String convertToTwoDecimalPlace(**double** value)

{

DecimalFormat decimalFormat=**new** DecimalFormat("0.00");

**return** decimalFormat.format(value);

}

**public** **static** **void** main(String[] args) {

Scanner scanner=**new** Scanner(System.***in***);

System.***out***.println("Enter the number of workers in the site");

**int** workersNumber=Integer.*parseInt*(scanner.nextLine());

**if**(workersNumber<5)

{

System.***out***.println("Number of worker below the range");

System.*exit*(0);

}

**int** count=0;

**double** totalAmount=0.00;

**while**(count<workersNumber)

{

System.***out***.println("Enter Wage:");

**double** wage=Double.*parseDouble*(scanner.nextLine());

**if**(wage>=100.00 && wage <=250.00)

{

totalAmount=totalAmount+wage;

count++;

}

**else**

{

System.***out***.println("Sorry wrong wage figure...");

}

}

String totalWage=*convertToTwoDecimalPlace*(totalAmount);

**double** value=totalAmount/(**double**)workersNumber;

String averageWage=*convertToTwoDecimalPlace*(value);

System.***out***.println("The Total Wage paid "+totalWage);

System.***out***.println("The Average Wage paid "+averageWage);

}

}

}

Junit Testing

**import** **static** org.junit.Assert.\*;

**import** org.junit.Test;

**public** **class** MainTest {

@Test

**public** **void** testConvertToTwoDecimalPlace() {

*assertEquals*("9866.74", Main.*convertToTwoDecimalPlace*(9866.7389));

*assertEquals*("9234.00", Main.*convertToTwoDecimalPlace*(9234));

}

}

Test Data1

Enter the number of workers in the site

3

Number of worker below the range

Test Data2

Enter the number of workers in the site

7

Enter Wage:

125

Enter Wage:

200

Enter Wage:

150

Enter Wage:

275

Sorry wrong wage figure...

Enter Wage:

250

Enter Wage:

175

Enter Wage:

185

Enter Wage:

225

The Total Wage paid 1310.00

The Average Wage paid 187.14

Learning outcome: Participant could able to learn how to use the java decimal formatting, while loop over for loop.