### 10.22作业，第一、二章例题

#### 程序清单1-1

**package test;**

**public class WelcomeWithThreeMessage {**

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

**System.out.println("Programming is fun");**

**System.out.println("Fundamentals First");**

**System.out.println("Problem Driven");**

**}**

**}**

#### 程序清单1-2

**package test;**

**public class ComputeExpression {**

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

**System.out.println((10\*5+2\*3)/(45-3.5));**

**}**

**}**

#### 程序清单1-3

**package test;**

**public class ShowSyntaxErrors {**

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

**System.out.println("Welcome to Java");**

**}**

**}**

#### 程序清单2-1

**package** git\_demo;

**public** **class** ComputeArea{

**public** **static** **void** main(String[] args) {//定义主方法，main方法是程序开始执行的入口

**double** radius;

**double** area;

radius = 20;

area = radius \* radius \* 3.14159;

System.***out***.println("The area for the circle of radius " + radius + " is " + area);

}

}

#### 程序清单2-2

**package** git\_demo;

**import** java.util.Scanner;

**public** **class** ComputeAreaWithConsoleInput {

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

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

System.***out***.print("Enter a number for radius:");

**double** radius=input.nextDouble();

**double** area = radius \* radius \* 3.14159;

System.***out***.println("The area for the circle of radius " + radius + " is " + area);

}

}

#### 程序清单2-3

**package** git\_demo;

**import** java.util.Scanner;

**public** **class** ComputeAverage {

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

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

System.***out***.print("Enter three numbers: ");

**double** number1=input.nextDouble();

**double** number2=input.nextDouble();

**double** number3=input.nextDouble();

**double** average = (number1+number2+number3)/3;

System.***out***.println("The average of " + number1 + " " + number2 + " " + number3 + " " + " is " + average);

}

}

#### 程序清单2-4

**package** test;

**import** java.util.Scanner;

**public** **class** ComputeAreaWithConstant {

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

**final** **double** PI=3.14159;

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

System.***out***.println("Enter a number for radius:");

**double** radius = input.nextDouble();

**double** area = radius \* radius \* PI;

System.***out***.println("The area for the circle of radius " + radius + " is " +area);

}

}

#### 程序清单2-5

**package** test;

**import** java.util.Scanner;

**public** **class** DisplayTime {

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

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

System.***out***.print("Enter an integer for seconds: ");

**int** seconds = input.nextInt();

**int** minutes = seconds / 60;

**int** remainingSeconds = seconds % 60;

System.***out***.println(seconds + " seconds is " + minutes + " minutes and " + remainingSeconds + " seconds");

}

}

#### 程序清单2-6

**package** test;

**import** java.util.Scanner;

**public** **class** FahrenheitToCelsius {

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

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

System.***out***.print("Enter an degree in Fahrenheit: ");

**double** fahrenheit = input.nextDouble();

**double** celsius = (5.0 / 9) \* (fahrenheit - 32);

System.***out***.println("Fahrenheit " + fahrenheit + " is " + celsius + " in Celsius");

}

}

#### 程序清单2-7

**package** test;

**import** java.util.Scanner;

**public** **class** ShowCurrentTime {

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

**long** totalMilliseconds = System.*currentTimeMillis*();//获取1970年1月1日午夜到现在的毫秒数

**long** totalSeconds = totalMilliseconds / 1000;

**long** currentSecond = totalSeconds % 60;

**long** totalMinutes = totalSeconds / 60;

**long** currentMinute = totalMinutes % 60;

**long** totalHours = totalMinutes / 60;

**long** currentHour = totalHours % 24;

System.***out***.println("Current time is " + currentHour + ":" + currentMinute + ":" + currentSecond + " GMT");

}

}

#### 程序清单2-8

**package** test;

**import** java.util.Scanner;

**public** **class** SaleTax {

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

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

System.out.print("Enter purchase amount: ");

**double** purchaseAmount = input.nextDouble();

**double** tax = purchaseAmount \* 0.06;

System.out.println("Sales tax is $" + (**int**)(tax \* 100) / 100.0);

}

}

#### 程序清单2-9

**package** test;

**import** java.util.Scanner;

**public** **class** ComputeLoan {

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

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

//

System.***out***.print("Enter annual interest rate,e.g.,7.25: ");

**double** annualInterestRate = input.nextDouble();

//

**double** monthlyInterestRate = annualInterestRate / 1200;

System.***out***.print("Enter number of years as an interger,e.g.,5: ");

**int** numberOfYears = input.nextInt();

//

System.***out***.print("Enter loan amount,,e.g.,120000.95: ");

**double** loanAmount = input.nextDouble();

//

**double** monthlyPayment = loanAmount \* monthlyInterestRate / (1-1 / Math.*pow*(1+monthlyInterestRate, numberOfYears \* 12));

**double** totalPayment = monthlyPayment \* numberOfYears \* 12;

System.***out***.println("The monthly payment is $" + (**int**)(monthlyPayment \* 100) / 100.0);//先取整，保留两位小数

System.***out***.println("The total payment is $" + (**int**)(totalPayment \* 100) / 100.0);

}

}

#### 程序清单2-10

**package** test;

**import** java.util.Scanner;

**public** **class** ComputeChange {

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

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

//

System.***out***.print("Enter an amount in double,e.g.,11.56: ");

**double** amount = input.nextDouble();

**int** remainingAmount = (**int**)(amount \* 100);

//dollars

**int** numberOfOneDollars = remainingAmount /100;

remainingAmount = remainingAmount % 100;

//quarters

**int** numberOfQuarters = remainingAmount / 25;

remainingAmount = remainingAmount % 25;

//dimes

**int** numberOfDimes = remainingAmount / 10;

remainingAmount = remainingAmount % 10;

//nickels

**int** numberOfNickels = remainingAmount / 5;

remainingAmount = remainingAmount % 5;

**int** numberOfPennies = remainingAmount;

System.***out***.println("Your amount " + amount + " consists of");

System.***out***.println(" " + numberOfOneDollars + " Dollars");

System.***out***.println(" " + numberOfQuarters + " Dollars");

System.***out***.println(" " + numberOfDimes + " Dollars");

System.***out***.println(" " + numberOfNickels + "Dollars");

System.***out***.println(" " + numberOfPennies + " Dollars");

}

}