GitHub地址

Star-tears/sch_javatask: Java课程的作业 (github.com)

程序清单

程序清单1-1

```
public class Welcome{
    public static void main(String[] args){
        System.out.println("Welcome to Java");
    }
}
```

程序清单1-2

```
public class WelcomeWithThreeMessages{
    public static void main(String[] args){
        System.out.println("Pregramming is fun!");
        System.out.println("Fundamentals First");
        System.out.println("Problem Driven");
    }
}
```

程序清单1-3

```
public class ComputeExpression {
    public static void main(String[] args) {
        System.out.print("(10.5 + 2 * 3) / (45-3.5) = ");
        System.out.println((10.5 + 2 * 3) / (45 - 3.5));
    }
}
```

程序清单1-4

```
public class ShowSyntaxErrors {
    public static main(String[] args){
        System.out.println("Welcome to Java);
    }
}
```

程序清单1-5

```
public class ShowRuntimeErrors {
    public static void main(String[] args) {
        System.out.println(1 / 0);
    }
}
```

程序清单1-6

```
public class ShowLogicErrors {
    public static void main(String[] args) {
        System.out.print("Celsius 35 is Fahreheit degree ");
        System.out.println((9 / 5) * 35 + 32);
    }
}
```

程序清单2-1

```
public class ComputeArea {
    public static void main(String[] args) {
        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

```
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 the 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

```
import java.util.Scanner;

public class ComputeAverage {
    public static void main(String[] args) {
```

```
        // Create a Scanner object
        Scanner input = new Scanner(System.in);

        // Prompt the user to enter three numbers
        System.out.print("Enter three numbers: ");
        double number1 = input.nextDouble();
        double number2 = input.nextDouble();
        double number3 = input.nextDouble();

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

        // Display results
        System.out.println("The average of " + number1 + " " + number2 + " " +
number3 + " is " + average);
    }
}
```

程序清单2-4

```
import java.util.Scanner;

public class ComputeAreaWithConstant {
    public static void main(String[] args) {
        final double PI = 3.14159;// Declare a constant

        // Create a Scanner object
        Scanner input = new Scanner(System.in);

        // Prompt the user to enter a radius
        System.out.print("Enter a number of radius: ");
        double radius = input.nextDouble();

        // Compute area
        double area = radius * radius * PI;

        // Display results
        System.out.println("The area for the circle of radius " + radius + " is
" + area);
    }
}
```

程序清单2-5

```
import java.util.Scanner;

public class DisplayTime {
    public static void main(String[] args) {
        Scanner input = new Scanner(System.in);
        // Prompt the user for input
        System.out.print("Enter an integer for seconds: ");
        int seconds = input.nextInt();
```

```
        int minutes = seconds / 60;// Find minutes in seconds
        int remainingSeconds = seconds % 60;// seconds remaining
        System.out.println(seconds + " seconds is " + minutes + " minutes and "
+ remainingSeconds + " seconds");
    }
}
```

程序清单2-6

```
import java.util.Scanner;

public class FahrenheitToCelsius {
    public static void main(String[] args) {
        Scanner input = new Scanner(System.in);

        System.out.print("Enter a degree in Fahrenheit: ");
        double fahrenheit = input.nextDouble();

        //Convert Fahrenheit to Celsius
        double celsius = (5.0 / 9) * (fahrenheit - 32);
        System.out.println("Fahrenheit "+fahrenheit+" is "+celsius+ " in
Celsius");
    }
}
```

程序清单2-7

```
public class ShowCurrenrTime {
    public static void main(String[] args) {
        long totalMillis = System.currentTimeMillis();
        long totalSeconds = totalMillis / 1000;
        long currentSecond = totalSeconds % 60;
        long totalMinutes = totalSeconds / 60;
        long currentMinute = totalMinutes % 60;
        long totalHours = totalMinutes / 60;
        long currentHour = (totalHours + 8) % 24;
        System.out.println("Current time is " + currentHour + ":" +
currentMinute + ":" + currentSecond + " GMT+8");
    }
}
```

程序清单2-8

```
import java.util.Scanner;

public class SalesTax {
    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

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

程序清单2-10

```
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 of double, for example 11.56: ");
        double amount = input.nextDouble();

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

        int numberOfOneDollars = remainingAmount / 100;
        remainingAmount = remainingAmount % 100;
```

```
        int numberOfQuarters = remainingAmount / 25;
        remainingAmount = remainingAmount % 25;

        int numberOfDimes = remainingAmount / 10;
        remainingAmount = remainingAmount % 10;

        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 + " quarters");
        System.out.println(" " + numberOfDimes + " dimes");
        System.out.println(" " + numberOfNickels + " nickels");
        System.out.println(" " + numberOfPennies + " pennies");
    }
}
```