GitHub地址：https://github.com/HuaZhouyang/Course\_JavaProgramming

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**Unit 1:**

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**1-1 Welcome.java:**

package Unit\_1;

public class \_1\_Welcome {

public static void main(String[] args) {

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

}

}

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**1-2 WelcomeWithThreeMessages.java:**

package Unit\_1;

public class \_2\_WelcomeWithThreeMessages {

public static void main(String[] args) {

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

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

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

}

}

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**1-3 ComputeExpression.java:**

package Unit\_1;

public class \_3\_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));

}

}

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**1-4 ShowSyntaxErrors.java:**

package Unit\_1;

public class \_4\_ShowSyntaxErrors {

public static void main(String[] args) {

// 4 errors

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

}

}

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**1-5 ShowRuntimeErrors.java:**

package Unit\_1;

public class \_5\_ShowRuntimeErrors {

public static void main(String[] args) {

// ArithmeticException

System.out.println(1 / 0);

}

}

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**1-6 ShowLogicErrors.java:**

package Unit\_1;

public class \_6\_ShowLogicErrors {

public static void main(String[] args) {

// "/"是整数除法

System.out.print("Celsius 35 is Fahrenheit degree ");

System.out.println((9 / 5) \* 35 + 32);

}

}

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**Unit 2:**

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**2-1 ComputeArea.java:**

package Unit\_2;

public class \_1\_ComputeArea {

public static void main(String[] args) {

double radius = 20;

double area = radius \* radius \* 3.14159;

System.out.println("The area for the circle of radius " +

radius + " is " + area);

}

}

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**2-2 ComputeAreaWithConsoleInput.java:**

package Unit\_2;

import java.util.Scanner;

public class \_2\_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);

}

}

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**2-3 ComputeAverage.java:**

package Unit\_2;

import java.util.Scanner;

public class \_3\_ComputeAverage {

public static void main(String[] args) {

Scanner input = new Scanner(System.in);

System.out.println("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);

}

}

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**2-4 ComputeAreaWithConstant.java:**

package Unit\_2;

import java.util.Scanner;

public class \_4\_ComputeAreaWithConstant {

public static void main(String[] args) {

final double PI = 3.14159;

Scanner input = new Scanner(System.in);

System.out.print("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);

}

}

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**2-5 DisplayTime.java:**

package Unit\_2;

import java.util.Scanner;

public class \_5\_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");

}

}

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**2-6 FahrenheitToCelsius.java:**

package Unit\_2;

import java.util.Scanner;

public class \_6\_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();

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

System.out.println("Fahrenheit " + fahrenheit + " is " +

celsius + " in Celsius");

}

}

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**2-7 ShowCurrentTime.java:**

package Unit\_2;

public class \_7\_ShowCurrentTime {

public static void main(String[] args) {

long totalMilliseconds = System.currentTimeMillis();

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");

}

}

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**2-8 SalesTax.java:**

package Unit\_2;

import java.util.Scanner;

public class \_8\_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);

}

}

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**2-9 ComputeLoan.java:**

package Unit\_2;

import java.util.Scanner;

public class \_9\_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);

}

}

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**2-10 ComputeChange.java:**

package Unit\_2;

import java.util.Scanner;

public class \_10\_ComputeChange {

public static void main(String[] args) {

Scanner input = new Scanner(System.in);

System.out.print("Enter an amount in 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");

}

}