

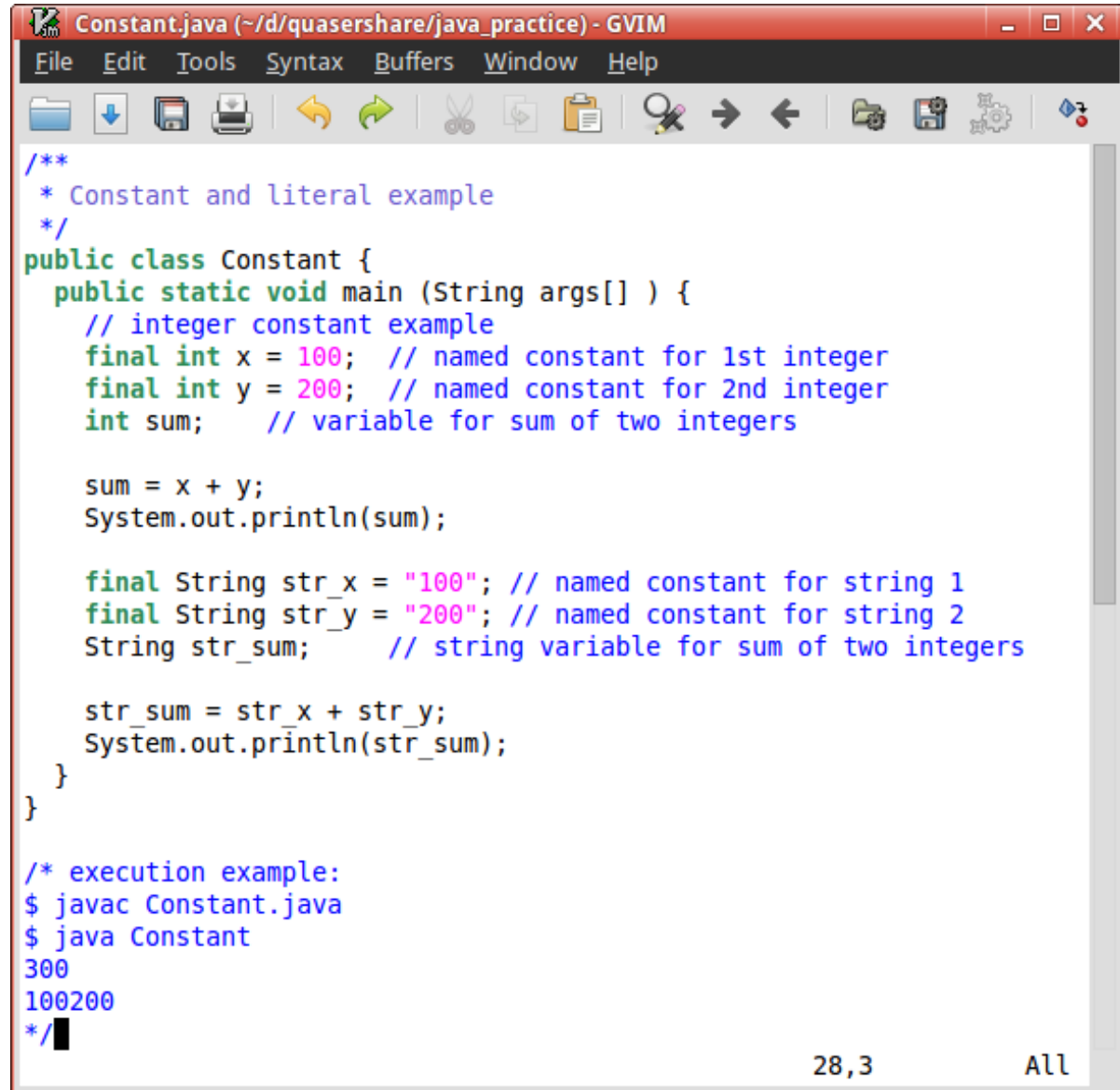
# **Exercise part 1 for Chapter 2 Elementary Programming**

COMP217  
Java Programming  
Spring 2019

# Constant example

Write a java code  
“Constant.java” and  
translate it into C

Submission:  
Constant.java  
Constant.c



```
Constant.java (~/d/quasershare/java_practice) - GVIM
File Edit Tools Syntax Buffers Window Help

/**
 * Constant and literal example
 */
public class Constant {
    public static void main (String args[] ) {
        // integer constant example
        final int x = 100; // named constant for 1st integer
        final int y = 200; // named constant for 2nd integer
        int sum; // variable for sum of two integers

        sum = x + y;
        System.out.println(sum);

        final String str_x = "100"; // named constant for string 1
        final String str_y = "200"; // named constant for string 2
        String str_sum; // string variable for sum of two integers

        str_sum = str_x + str_y;
        System.out.println(str_sum);
    }
}

/* execution example:
$ javac Constant.java
$ java Constant
300
100200
*/
```

28,3 All

# Example: Annual Salary

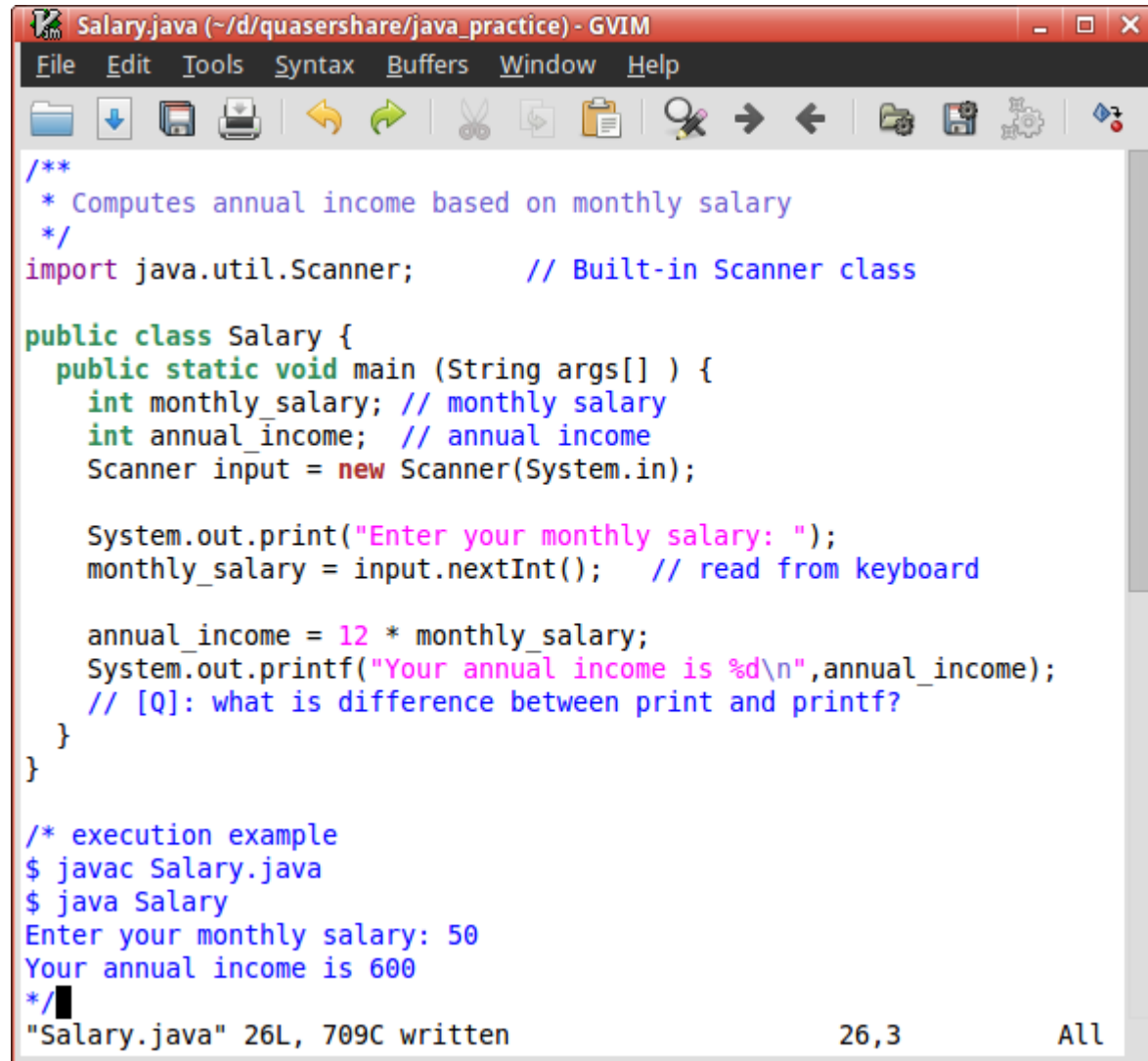
1. Read monthly salary from keyboard
2. Compute annual salary
3. Print it

Then, translate it into C

Submission:

Salary.java

Salary.c



```
/**
 * Computes annual income based on monthly salary
 */
import java.util.Scanner;          // Built-in Scanner class

public class Salary {
    public static void main (String args[] ) {
        int monthly_salary; // monthly salary
        int annual_income;  // annual income
        Scanner input = new Scanner(System.in);

        System.out.print("Enter your monthly salary: ");
        monthly_salary = input.nextInt(); // read from keyboard

        annual_income = 12 * monthly_salary;
        System.out.printf("Your annual income is %d\n",annual_income);
        // [Q]: what is difference between print and printf?
    }
}

/* execution example
$ javac Salary.java
$ java Salary
Enter your monthly salary: 50
Your annual income is 600
*/
```

"Salary.java" 26L, 709C written 26,3 All

# Area of a Circle

1. Read radius from keyboard
2. Compute the area of the circle
3. Print it

Then, translate it into C

Submission:

CircleArea.java

CircleArea.c

```
CircleArea.java + (~/d/quasershare/java_practice) - GVIM
File Edit Tools Syntax Buffers Window Help

import java.util.Scanner;           // Built-in Scanner class

public class CircleArea {
    public static void main (String args[] ) {
        double radius;              // diameter
        double area;                // area
        Scanner input = new Scanner(System.in);
        System.out.print("Enter the radius: ");
        radius = input.nextDouble();
        // nextInt: read an INTEGER from keyboard
        // nextDouble: read a REAL NUMBER from keyboard
        // [Q]: what happens if we use radius = input.nextInt(); ?

        area = 3.14 * radius * radius;
        // [Q]: any operator for square (r^2) ?

        System.out.print("Area = ");
        System.out.println(area);    // method 1
        System.out.printf("Area = %f\n", area); // method 2
        System.out.println("Area = " + area);  // method 3
    }
}

/* execution example
quaser:java_practice$ javac CircleArea.java
quaser:java_practice$ java CircleArea
Enter the radius: 5.6
Area = 98.4704
Area = 98.470400
Area = 98.4704
*/
```

