

# CSE 301 Midterm-I Exam

## I. QUESTION

Write a Java program that accepts a person's weight (in pounds) and displays the number of calories the person needs in one day. A person needs 19 calories per pound of body weight. Use JOptionPane for input and output.

## II. QUESTION

Write a Java program that reads integers until the user enters 0. The program then displays the average of the numbers which are between 30 and 90 inclusive.

## III. QUESTION

Write a Java program that displays all integers between low and high that are the sum of the cube of their digits. In other words, find all numbers  $xyz$  such that  $xyz = x^3 + y^3 + z^3$ , for example,  $153 = 1^3 + 5^3 + 3^3$ .

## IV. QUESTION

Write a Java program that reads a purchase price and amount tendered and then displays the change in dollars, quarters (25 cents), dimes (10 cents), nickels (5 cents), and pennies (1 cent). Two input values are entered in cents, for example, 3480 for \$34.80 and 70 for \$0.70. Use any appropriate technique for input and output. Sample output:

```
Purchase Price: $34.80
Amount Tendered: $40.00
Your change is: $5.20
5 one-dollar bill(s)
0 quarters
2 dimes(s)
0 nickel(s)
0 penn(y/ies)
```

## V. QUESTION

At the end of movie credits you see the year movies are produced in Roman numerals, for example, MCMXCVII for 1997. To help the production staff determine the correct numeral for the production year. Write a Java program that reads a year and displays the year in Roman numerals.

Roman Numeral	Number
I	1
V	5
X	10
L	50
C	100
D	500
M	1000

Remember that certain numbers are expressed by using a "subtraction", for example IV for 4, CD for 400, and so forth.