Pseudocode and Java

Pseudocode is like a draft of a program. It is a description that shows the steps of the program.

Example 1: Program to calculate the area of a rectangle

```
{
        Tell user to enter the length
        Read length
        Tell user to enter the breadth
        Read breadth
        Calculate area = length * breadth
        Display area
}
```

The program in Java is the following:

Class AreaRectangle

```
1  public class AreaRectangle
2  {
3     public static void main (String[] args)
4     {
5        System.out.println ("Enter the length");
6        double length = Keyboard.readDouble();
7        System.out.println ("Enter the breadth");
8        double breadth = Keyboard.readDouble();
9        double area = length * breadth;
10       System.out.println ("The area is : " + area);
11    }
12 }
```

Example 2: Program that calculates volumes

```
{
        Tell user to enter a choice 1 for cube or 2 for prism
        Read choice
        If choice = 1
        {
                Tell user to enter the length of the side
                Read side
                Volume = side * side * side
                Display volume
        }
        If choice = 2
        {
                Tell user to enter area of base
                Read baseArea
                Tell user to enter the height
                Read height
                Volume = baseArea * height
                Display volume
        }
}
```

The program in Java is the following:

Class Volumes

```
1  public class Volumes
2  {
3     public static void main (String[] args)
4     {
5        System.out.println ("Enter your choice: (1) cube, (2) prism");
6        int choice = Keyboard.readInt();
7        if (choice == 1)
8        {
9           System.out.println ("Enter side");
10          double side = Keyboard.readDouble();
11          double volume = side*side*side;
12          System.out.println ("Volume = " + volume);
13       }
14       if (choice == 2)
15       {
16          System.out.println ("Enter base area");
17          double baseArea = Keyboard.readDouble();
18          System.out.println ("Enter base height");
19          double height = Keyboard.readDouble();
20          double volume = baseArea*height;
21          System.out.println ("Volume = " + volume);
22       }
23    }
24 }
```

Exercise:

1) Convert the following pseudocode in a Java program.

```
{
    Tell user to enter a number
    Read num1
    Tell user to enter a second number
    Read num2
    Tell user to enter a third number
    Read num3
    average = (num1 + num2 + num3) / 3
    display the average
}
```

2) Convert the following pseudocode in a Java program.

```
{
    Tell the user to enter the name of the first singer
    read name1
    Tell the user to enter the number of votes of the first singer
    read votes1
    Tell the user to enter the name of the second singer
    read name2
    Tell the user to enter the number of votes of the second singer
    read votes2
    if votes1>votes2
        then display (name1 wins the festival)
    if votes2>votes1
        then display (name2 wins the festival)
    if votes1=votes2
        then display (name1 and name2 both win the festival)
}
```

3) Convert the following pseudocode to a Java program.

```
{
    counter = 1
    while (counter <10)
    {
        Display counter
        Increment counter by 1
    }
    Display Goodbye
}
```