# Exercises - Variables

1. Read from keyboard the user’s name and where their are from and print a greeting:  
     
   Hi, name greets town  
     
   Detail steps: Define two local variables name and town. Ask the user using System.out.print(); to write their name and read it using String name = console.nextLine();. Read the user’s town in a similar fashion. Print everything to the screen.  
   Note: console is also a local variable defined at the beginning of the program like this: Scanner console = Scanner(System.in);  
     
   Sample output:  
     
   Enter your name: *Adalberta*  
   Enter your town: *Horni Cerekev*  
   Hi, Adalberta greets Horni Cerekev
2. Define two local variables for integer numbers gooseCount and rabbitCount. Read their values from the user. (Don’t forget to politely ask the user, similarly as in the previous example). Define some more variables animalCount and legCount, to which you will sum the correct numbers. Print the result to the screen.  
     
   Sample output:  
     
   Enter number of geese on the farm: *4*  
   Enter number of rabbits on the farm: *3*   
   There are 7 animals on the farm and they have 20 legs in total ;-)
3. Define variable totalPrice and read a decimal number with the decimal point ( scanner.nextDouble() ). Define also priceToPay and round the original decimal number into it ( Math.round() ). Print both values to the screen.  
     
   Sample output:  
     
   Enter total price of the shopping: *11.65*  
   Total price is: 11.65  
   Price to pay is: 12
4. Create a program which will read the year the user was born and print the user’s age. Perform the calculation only on the year basis, ignore the day and month.
5. Generate a random chance (0 to 100 %) and print it to the screen.  
     
   Detail steps: Define a variable successRate which will be assigned a random number ( Math.random() ). The number is always generated between 0 and 0.999999999. Amend the number to be between 0 do 100 (also round it). Print the success rate to the screen.  
     
   Sample output:  
     
   Your chance is: 65 %
6. (Bonus) Create a program which will read width and height of a rectangle from the user. Print its circumference and area.
7. (Bonus) Create a program which will read two numbers from the user. The program will then print their sum, difference, product and quotient.  
     
   Sample output:  
     
   Enter first number: *10*  
   Enter second number: *20*   
   Do the math: 10 + 20 = 30  
   Do the math: 10 - 20 = -10  
   Do the math: 10 \* 20 = 200  
   Do the math: 10 / 20 = 0.5
8. (Bonus) Create a small program to convert between various lenght units. The user would enter a length in meters and the program will print the length in cm, km, miles, yards and inches. You can find conversion formulas on the internet (Wikipedia?).  
     
   Sample output:  
     
   Enter lenght in meters: *10*  
   The same lenght in various units is:  
   1000 cm  
   0.01 km  
   0.00621 mi  
   10.93 yards  
   393.7 inch