Computer Science I – Prepa Tec Campus Eugenio Garza Lagüera  
Activity 8: Scanner Class

**Submit your answers to the following problems to Canvas. Make sure to upload the Java source code files (.java).**

**Note: Check the following video to avoid problems when using nextInt() and nextLine():** [Link](https://www.youtube.com/watch?v=_xqzmDyLWvs)

**Problem 1:** Design a program that can read two integer numbers from the keyboard, and print its multiplication.

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| > Input a number: 6  > Input another number: 3  > Result: 18 |

**Problem 2:** Design a program that can read 4 phrases or words from the keyboard. Then, it should print a sentence using the captured values. Come up with a creative sentence yourself.

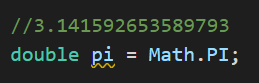
To concatenate Strings and variables, remember that you can use the addition (+) operator.

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| > Name of a pet: Bruno  > Name of a dog breed: Australian Cattle Dog  > Its Favorte toy: freesbee  > Its favorite food: apples  Bruno is my Australian Cattle Dog. He/she loves playing with his freesebee. After playing for a couple of hours, he/she loves to eat apples. |

**Problem 3:** Today is Martina’s birthday, so his friends got together to buy a cake for her. Design a program that can capture the price, diameter (in centimeters), and the amount of slices the cake will be divided into. With this information, calculate:

* The total area of the cake
* The total area of each cake slice
* The price for each slice

*Hint: By default, Java includes the Math class, which allows programmers to use mathematical constants. If you need to refer to the value of PI, you can use Math.PI, as seen below.*

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Example:

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| > Cake diamater(cm): 25  > Cake price ($): 250  > Cake slices: 10  > Area of the cake: 490.8738521234052 cm2  > Area for each slice: 49.08738521234052 cm2  > Price for each slice: $ 25.0 |

**Challenge problem! (For extra credit). Build a program that can model the following interaction:**

A customer enters a shop to buy some goods. Let’s say milk boxes. We simulate a simple cash register. The user is the cashier and uses our cash register to calculate the total price and the rest for the customer.

Our cash register asks the cashier:

* How many boxes the customer has bought.
* The price for each box.
* The amount of cash the customer gives to the cashier.

The cash register prints the total and the rest.