Homework 4

In a machine manufacturing process in a factory, many different parts of machines are used. The stock control needs to know the name and the number in stock of every machine part. Some of the machine parts are from this same factory, and in that case information of the amount and unit price of the raw material is needed. Some of the machine parts are purchased and in that case information of the price and the supplier is needed. Design and implement classes that describe the characteristics of different machine parts. Declare instance variables as private. Use inheritance and an abstract base class. Implement at least (there can be more methods if you need):

- constructor
- getters for name and number in stock
- toString method (returns the values of the variables of an object as a string)
- method that calculates the inventory value of the stock of a machine part (price * number_in_stock or raw_material_unit_price * raw_material_amount * number_in_stock)

Write a main method that stores all the machine parts in one ArrayList collection. Create some machine parts and add those in the ArrayList collection.

Print out the objects in the ArrayList using their toString method.

Write another loop that prints out the names and inventory values of machine parts.

(This program do not need to ask values form the user.)

Copy your program code and example of running the program in one document and submit it to Moodle.