Gebze Technical University
Department of Computer Engineering
CSE 241/501
Object Oriented Programming
Fall 2015
Homework # 9
Due date Dec 28th 2015

In this homework, you will write your first Java program.

Write a Java class that represents a polynomial such as

$$a_n x^n + a_{n-1} x^{n-1} + \cdots + a_2 x^2 + a_1 x + a_0,$$

Your class will keep the coefficients (**a_i, $i=0...n$**) of the polynomial.
You will design your class methods and fields yourself. However, your class shoud have the following capabilities

- It can take a double array to set all of the coefficients.
- It can return a double array that contains all of the coefficients.
- It can set and get each coefficient separately.
- Given an x value, it can evaluate the polynomial and return the result
- It has methods that take another Polynomial and adds/substracts/multiplies with this polynomial and returns the result
- Redefines the toString and equals methods

Test your Polynomial class with many examples and include your test results in your submission.

Use javadoc to document your classes and submit javadoc results with your java files and sample run results.