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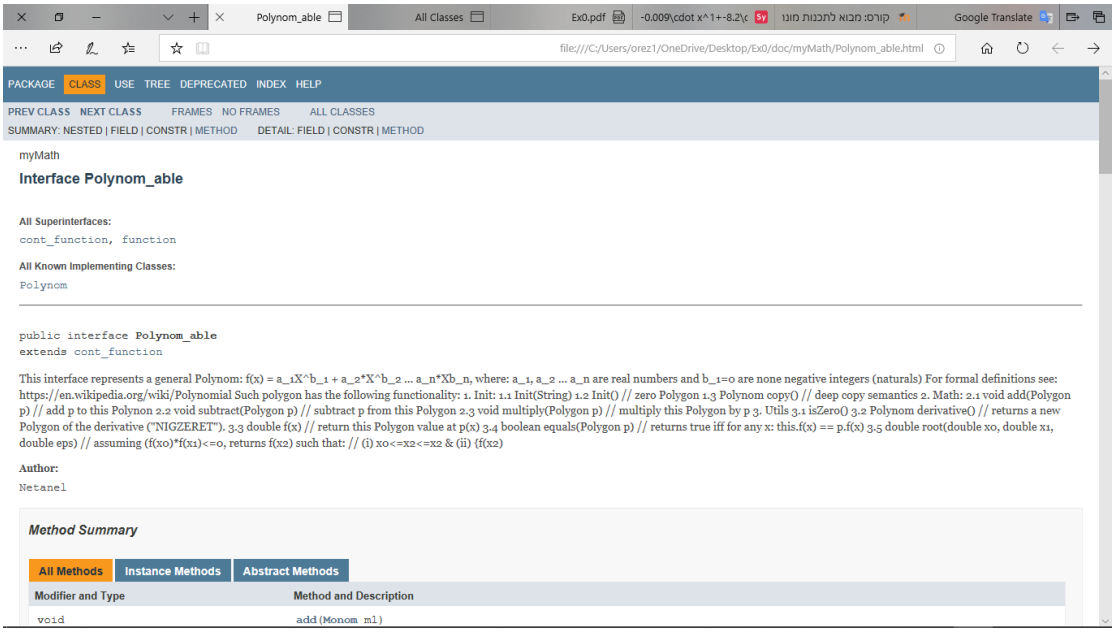
This file is intended to show and explain the purpose of the project, what it does, and what capabilities it gives to those who use it.

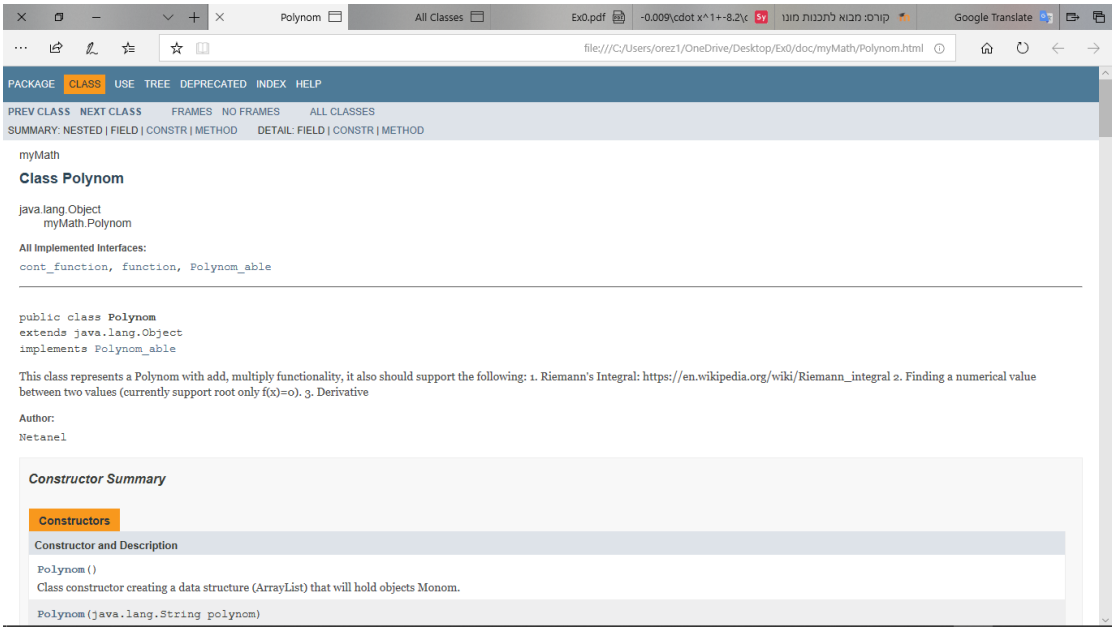


Before us we will see a Polynom_able interface which contains statements on many functions which require implementation in the classes that will be implement the interface. This interface represents a general polynomial of the form :

f(x) = a_1X^b_1 + a_2*X^b_2 ... a_n*Xb_n, where: a_1, a_2 ... a_n are real numbers and b_1=0…b_n are none negative integers (naturals). A general view can be seen as a polynomial composed of a collection of many monom. Each such monom contains two fields: coefficient and power, which distinguish between monom and monom ,therefore, the polynomial itself is defined as a collection.

In this project the user inserts a particular polynomial and gets the option to perform the following operations on this polynomial like : initialization, add polynom with polynom, subtract between 2 polynom, multiply, derivative, equal between to polynoms, copy polynom, the value of f(x)(of interface function), root approximate value (by numerical method), area by compute Rimman's integral by calculate sum of rectangle in eps size step.

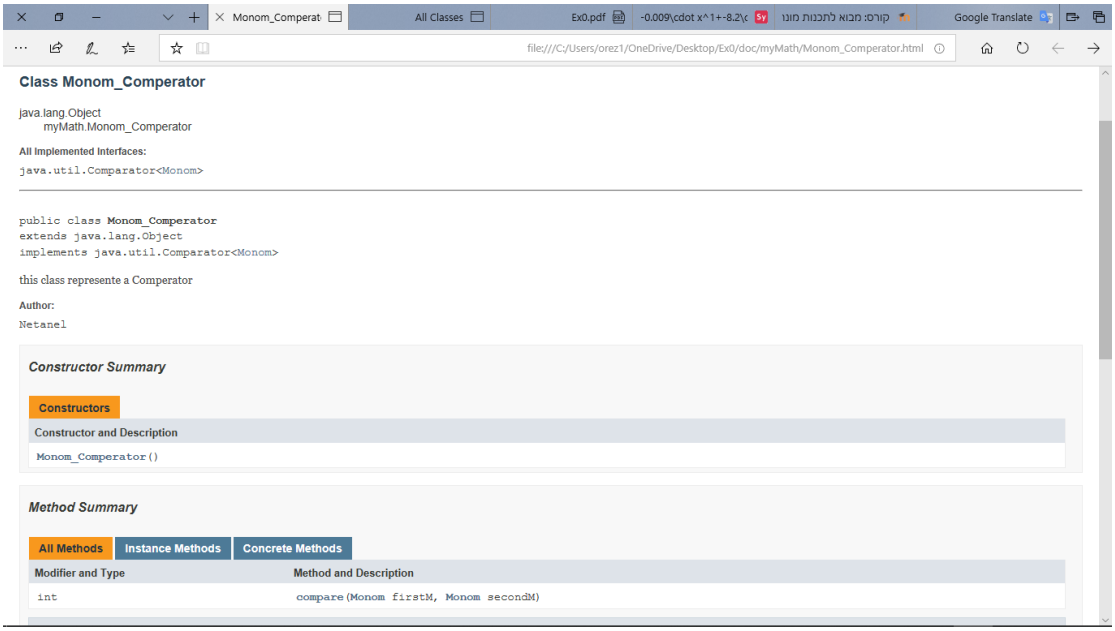
It is also possible to see that polynom_able is also a extends to the cont_function interface, which is an interface for continuous functions. Since polynom is a continuous function, it will inherit this interface and therefore receives an additional function / function that can be performed by Rimman's integral(area).



The class that implements the Polynom_able interface is the Polynom class. The class definition is to define a collection of monoms that will be the polynomial.

The Polynom can be captured as the creation of a new Polynom object that contains a collection of monom objects, or in the form of a string that the constructor receives, converts it to the expected polynomial (pay attention to input input correctly).

The Monom class mentioned above defines what is a normal monom and also performs actions such as: addition, subtraction, multiplication, derivative and comparison between monom.
These actions are performed on a single monom, so the Polynom class that performs these operations on its polynom, consisting of a collection of monoms, will often use this class because it acts directly and briefly on the polynomial monoms.



The Monom_Comperator class is a class that defines the object attribute created from this class and is an object whose main function is a comparison function.
This class function is used to compare Monom's strengths for various operations that use this class object (such as sorting)