A Ilica 242, HR-10000 Zagreb
T (01) 2222 182
E student@algebra.hr
www.algebra.hr

ALGEBRA

Learning objective 01

Task 11. Create a data type that will represent an HTTP client and allow its users to retrieve HTTP content. You want to allow users to specify only the URL when creating an object (so port 80 is assumed) or both the URL and the port. Provide users with the **get** and **post** method without parameters that return some 10-character random string. Use the data type to retrieve POST data from https://www.bla.com and port 443.

Task 12. a) Based on Table <Table from Lecture 3>, answer which algorithms have the best performance when deleting, if we look at the worst case. Explain your choice. b) Generate 10,000 random integers between 1 and 5. After that, calculate and print the average of all these numbers. It is also necessary to calculate and print the total duration of the entire job (from generation to calculation of the average).

Task 13. Considering the LakeHuron.csv file, print the answer to the following question: which year was the water level of the Huron River (Michigan) the highest. The solution must also work when changing the age and water level data in the file (ie you can't just print "1872"). Determine and explain *a priori* complexity of your algorithm.