MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE

NATIONAL TECHNICAL UNIVERSITY

«KHARKIV POLYTECHNIC INSTITUTE»

Department of Software Engineering and Management Information Technologies

Report from lab № 9

Discipline «Algorithm and Data Structures»

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2019

Theme: Red Black Trees

Objective: learn how to assess the complexity of recursive algorithms

Task

For an algorithm whose complexity is described by recurrent formula T(n)=aT(n/b)+f (n) (according to variant), define the complexity using the following methods: − substitution method; − converting to a sum; − master method for solving recurrences; − modeling using a program (get T(n) for different n and find a formula). Compare obtained results

T(n)=2T(n/2)+n

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