## Шайма бидан ALGORITHMS FUNDAMENTALS THEORY

КН 220 i.в

### **Laboratory Training 9**

*GREEDY ALGORITHMS*

**Objective:**

Learn how to use greedy algorithms and evaluate their complexity.

**Task**:

Develop a program that reads the input and solves the problem using dynamic programming. Determine the complexity of the algorithm.

**Variant:**

Solve the problem of choosing the largest number of activities for a room. Input: number of activities N (1 <N <256), N pairs of integers being the beginning and end 𝑠𝑖, 𝑓𝑖. Output: activities ordered by increasing of end time, and the number of chosen activities.

*Greedy algorithm:*

Greedy is an algorithmic paradigm that builds up a solution piece by piece, always choosing the next piece that offers the most obvious and immediate benefit. Greedy algorithms are used for optimization problems.

Suggested Code for this lab: