

One of the clearest examples of the design of economic mechanisms is the design of the system for enrolling university entrants. We present the simulation results of the dynamic version of the Gale-Shapley algorithm and discuss its convergence rate. In Russia, the process of entering universities is associated with risks. Until the very end, before the university publishes the lists of applicants, applicants cannot be sure whether they will be accepted to the program where they agreed to enroll. An applicant's chance to enter the program depends on other applicants who are higher than him in the ranking of this university. The stakes are high, so the applicant decides to wait and see where the higher-ranking applicants go before making a decision. And so does every rational entrant.

In this report we analyze the centralized system for assigning applicants to programs. Its main advantage is that there are no risks associated with admission after applicants make lists of programs and upload them to the super service where they would like to be enrolled potentially. In addition, applicants no longer need to carry consent to enrollment in one program, and each applicant makes a list of ordered programs where he would potentially like to be enrolled. If he receives an invitation from at least one program from his list, he will definitely go somewhere if he does not refuse all the offers on his own. The algorithm completes the distribution of applicants for educational programs in a reasonable time on synthetic data.

However, there are extreme cases that affect the rate of convergence. We provide several situations that may cause program places to fill longer than the desired number of days. In this regard, we propose the following solutions to the problems. Firstly, to introduce incentives for applicants during the main wave to refuse in advance from fewer priority programs. Secondly, to conduct the main wave for a fixed number of days and after conducting additional static recruitment.