

TRANSFORMATION OF DATA STRUCTURE IN SOFTWARE SYSTEMS FOR SOLVING THE OPTIMIZATION TASKS

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Modern software systems are complex multilevel systems. The purpose of the project to create software systems is the development of complex A product with architecture in the form of a hierarchy of elements, among which it is possible to highlight both simple and composite objects. The simple elements are classes that fully satisfy the description of the object (for example, sphere, circle, combining 2 spheres, etc.), complex - elements of the middle and upper levels (solver, system, framework).

The components in the information submission are elemental informational constituents of the task. In the presented There are two types of components that are the configuration elements: basic objects with generalizing variables and adapters that can provide Depending on the type of project, use the structure to solve the problem. In a real project of a multi-level information system use all types of listed components. To detect the necessary data structure Yu.G. Stoian and SV Yakovlev introduced the notion of geometric configuration space objects based on the formalization of geometric information.

The geometric information  $g = (\{s\}, \{m\}, \{p\})$  of the object  $S \subset R^3$  includes in the spatial form  $\{s\}$  as the equivalence class on the set of points sets; The metric parameters of the form  $\{\mu\} = (\mu_1, \dots, \mu_k)$ , which specify the dimensions object; accommodation parameters  $\{p\} = (p_1, \dots, p_l)$  defining the position object  $S$  in space  $R^3$ . On the set of geometric information Linear space of canonical information and general information information space for the system of geometric objects.

To solve various optimization problems there is a transformation information from basic objects, then depending on the task Optimization is supplemented by generalizing variables and corresponding ones limitations of geometric objects. In order to preserve the metric characteristics of the objects under study, existing methods were analyzed and, for a given task, a follow-up step is the implementation of the packaging task in the container.

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