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SOFTWARE ELEMENTS FOR THE SIMULATOR ON THE TOPIC "PREDICTIVE PARSING: SCHEME, PRINCIPLE OF OPERATION, APPLICATION" OF THE DISTANCE LEARNING COURSE "PROGRAMMING THEORY"

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Software elements of the simulator on the topic "Predictive parsing: scheme, principle of operation, application" of the distance learning course "Programming Theory" is proposed.

Keywords: SIMULATOR, PREDICTIVE PARSING, SCHEME, PRINCIPLE OF OPERATION.

The main purpose is to develop elements of the simulator software on the topic "Predictive parsing: scheme, principle of operation, application" of the distance learning course "Programming Theory".

The object of the course project is the process of distance learning in mathematical disciplines.

The subject of the course project is the algorithm of the simulator on the topic "Predictive parsing: scheme, principle of operation, application".

The list of methods used is the use of predictive parsing.

Non-recursive predictive analyzer can be constructed using explicit use of the stack instead implicit in the recursive calls. The key problem of predictive analysis is to identify products that need to be applied to non-terminal as well. A parse table can be used to find products.

Formulation of the problem:

1. Given an analyzer, use it to analyze the input stream. Namely: to learn to determine the products that need to be used at a certain step.
2. Learn to read and be able to compile a spreadsheet.

3. Create an algorithm for using a predictive analyzer.
4. Develop an algorithm simulator.

The simulator program provides:

- sequential display of tasks;
- control over the user's actions to solve the proposed task;
- instant reaction to wrong actions;
- demonstration of the correct solution of the problem;
- output of the final message about

The list of educational applications, platforms and resources below aim to help parents, teachers, schools and school administrators facilitate student learning and provide social care and interaction during periods of school closure. Most of the solutions curated are free and many cater to multiple languages.

The algorithm of the simulator outlines the main steps of constructing predicative parsers for further software implementation.

The list of the main tasks and reference information on them is given:

- operation of the analyzer program;
- algorithm 1. Non-recursive predictive analysis;
- algorithm 2. Construction of the set FIRST for grammar symbols;
- algorithm 3. Construction of FOLLOW (X) for all X-nonterminals of grammar;
- algorithm 4. Construction of predictive analysis tables.

After passing the completion message is displayed, the start page opens.

If the answer is incorrect, the output of reference information is implemented.

Creating simulators for distance learning - this opens up a new way for us to study for students of distance (distance) form of education. The advantage of simulators is that they can be used both for student training and for self-study.

The main results of the work:

1. Created theoretical material for the simulator;
2. Created tests for the simulator;
3. Developed an algorithm for the simulator on the topic "Predictive parsing: scheme, principle of operation,

application" of the distance learning course "Programming Theory".

Literature

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