

## **Development of the expert system prototype "medexpert" for differential disease diagnostics**

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### **Abstract**

The task of this article is creation a prototype of expert system "MEDEXpert" which will help to doctors in the analysis of collected data about the patient and the diagnosis. The article describes the "MEDEXpert" system, intended for informational support of medical solutions in medicine using modern information technologies, in particular, image recognition methods. The system uses a general decision-making technique using a differential series and the analogy method. The main problems of the field of creating medical expert systems were analyzed, and with their help the practical principle of the program part of the system was obtained. An integrated approach was proposed to analyze the data and obtain the necessary information for detecting the disease. The Visual Studio 2015 development environment and C #programming language, as well as a set of Windows Forms graphical tools and the Microsoft SQL Server 2015 database management system implemented the prototype. Computer technology intended for the classification, diagnosis, assessment of the state, analysis of the interaction of regulatory and therapeutic processes, selection, evaluation and correction of therapeutic measures. "MEDEXpert" can be used for training specialists.

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### **Keywords**

C#, Database management system, Expert system, Microsoft SQL, Visual studio 2015

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