

Docs 'n Drugs - a Web-Based and Case-Oriented Training System in Medicine

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Introduction:

In the virtual hospital medical students, medical doctors and students of related disciplines will have the opportunity to study knowledge and decision making in medicine using a web-based and case-oriented program in order to train their understanding of diseases, and their ability to treat patients.

Objectives:

We concentrate on fine-structuring the patient data as a basis for implementing various functions to support authoring and tutoring processes. The formalization is complemented with concept standards that comprise diagnosis (ICD10) and other medical subjects (Mesh).

It is a focal point of our project to present information and tasks of decision that contain didactical reflections. The structure of the tutoring script allows the implementation of various difficulty levels as well as the switch between training and testing modes.

Furthermore the user will be able to choose, whether he or she wants to work on a patient in a more guided way or in a completely free sequence of treatment. We also want to offer some ways of online-support, like the virtual consulting hours or a tutored meeting for case studies. For complementing and visualizing complex medical information we include multimedia elements.

Methods:

The sum of all of patients data is subdivided into two segments: data containing only the facts about the clinical picture of patients, and data containing formulated phrases, which appear in the user interface. The first segment is the basis for a medical knowledge based model. The combination of data and their interrelations leads to the implementation of intelligent functions, like for example the generation of automatic corrections and tips. The second segment of patient data is to be used for a structured tutorial path which includes didactical elements and interactive facilities.

The system will be implemented by Java and Corba objects.

Results:

Model cases deal with the special fields of gynaecology, infectiology and nephrology. Their inherent medical knowledge is extracted and tutoring scripts are developed from them. The resulting application is tested by a group of medical students.

Conclusion:

The application with its data structure backbone will provide a useful complement to the common education in medicine.

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