

Sofia University "St. Kliment Ohridski"  
Faculty of mathematic and informatics  
Department "Information technologies"

## Resume of graduation work

Of theme:

*„Application of declarative programming  
model for development of software  
applications“*

Graduated student: Bojidar Stanoev  
Supervisor: assoc. prof. Boyan Bontchev

Key words: declarative, programming model, workflow,  
activity, WF, BPEL

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### Annotation

With the advance of technologies for development of applications and open standards (XML), declarative programming gets a new impact for improvement. With this model the structure of a program is described as a flow of activities (workflow) and objects, specific for a domain. Users have a chance to create new tasks and objects which describe in details problem solving. These tasks after that are implemented in standard

programming languages. The closeness to the logical thinking of a human contributes for their easy creation in aid of visual editors. Good visual presentation lessens development for solving algorithmic problems or describing complex business processes.

The objective of this graduation work is to examine and present the declarative programming model and evaluate its applicability for development in software projects. There is an overview of declarative programming and languages for declarative programming. Declarative programming models Windows Workflow Foundation (WF) and Business Process Execution Language (BPEL) are examined. WF represents programming model and tools for rapid development of applications through a flow of activities. BPEL is an XML-based language for business processes modeling which is executable. It is evaluated the applicability of declarative programming model for development of software applications, its pros and cons and its possibility for extension. An example application for task creation is developed in the present graduation work to reveal the advantages of declarative programming model and WF.