



SUPERVISOR'S REPORT ON DIPLOMA THESIS

Name and Surname of Diploma Thesis Writer: Mohamed Abo Romia

Topic of Diploma Thesis: Business Intelligence Integration in Multinational Corporate Data Structure Management

Objective of Diploma Thesis: Creation of a data warehouse solution which is proposed for the improvement of the construction cost data analysis processes in a construction company.

Name and Surname of Supervisor: Ing. Athanasios Podaras, PhD

	Excellent	Very good	Good	Failed
I. Assessment of the thesis topic and its writing:				
Thesis topic completion	X			
Application of implemented methods	X			
Analysis performed and its profundity		X		
II. Assessment of thesis content and structure:				
Clarity and coherence of thesis		X		
Currency of the topic, appropriate sources		X		
Processing of sources and acquired data	X			
Comprehensible and adequate conclusions	X			
Phrasing of writer's points of view		X		
III. Assessment of thesis style:				
Formal layout of thesis (i.e. text, tables, graphs)		X		
Style of thesis (i.e. use of formal language)		X		
Application of academic sources in native language, including bibliographic references and citations		X		
Application of academic sources of foreign authors, including bibliographic references and citations		X		
Assessment of plagiarism checking result in IS STAG	Reviewed without objections			X
	Reviewed with objections			

The evaluation for the diploma thesis at least in the range of 10 lines in terms of meeting the thesis objectives, the application of implemented methods as well as suggestions for adjustments taken including formal layout, literature review and citations (formulate on the following page of the report).

The objective of the thesis is the creation of a data warehouse solution which is proposed for the improvement of the construction cost data analysis processes in a construction company which are currently supported by simple spreadsheet methods. The author definitely fulfils the main objective of the thesis. The diploma thesis deals with a topical issue which is the efficient decision support based on the analysis of big data storage and manipulation. Database systems and business intelligence tools give opportunities for increasing the company's competitive advantage, reduce the time of process implementation and support successfully corporate strategies. The author provides sufficient information regarding a) the theory behind the creation of a data warehouse solution and b) information related to the incorporation of data warehouse systems in the construction cost management domain. Moreover, the author successfully supports the physical data model with crucial





queries in MS Access software application and important OLAP analysis tasks in Ms Excel after exporting the necessary datasets. In general, it can be stated that the author has demonstrated a full comprehension of the database and business intelligence core concepts, his practical skills for developing practical database solutions from scratch and his ability to formulate a logically structured scientific document.

Negative points:

- The abbreviation list is incomplete, however the author explains the acronyms in the text.
- The resources used could be more. Even if the author has studied very important books related to the business intelligence and database system theory he could support his statements with more resources.
- The reference to data warehouse systems and software tools for construction cost management (p.40) is poor regarding the number of references incorporated.
- p.48 table 5. In questions 3 and 4 numerical values were expected as answers. Is it a typewriting error?
- p. 57, last line before Fig. 21. 'Microsoft Query' should be used instead of 'Microsoft SQL Query'. The same mistake is repeated in p. 60, line 1
- Annotation: I do not agree with the phrase (line 7) '*aggregate functions are calculated*'. Functions are used for calculations but they are not calculated.

Questions related to the diploma thesis defence:

- 1. One of the most common methods for analysing and modelling system requirements is the UML (Unified Modelling Language) Use Case method. What are the types of actors which can be included in a Use Case model and which specific actors would you propose for the design of your data warehouse solution?**
- 2. Business Intelligence systems support the prediction of future results with the help of data mining techniques. Can you mention two of the most common data mining tasks and which are the most important predictions which must be supported by the proposed data model?**

I recommend the diploma thesis for defence.

I suggest to evaluate the diploma thesis with the grade: Very Good

Date 3.5.2019

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Signature of thesis supervisor

