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**INFORMATION SYSTEM FOR BUSINESS PROCESS OPTIMIZATION IN
AUTOMOBILE SERVICE**

122 Computer Science and Information Technologies

Abstract of a Master's Thesis

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The thesis has been carried out at the Computer Science Department of Ternopil Ivan Puluj National Technical University, Ministry of Education and Science of Ukraine

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GENERAL CHARACTERISTIC OF THE THESIS

Actuality of the thesis. The area of Information System Analysis and Design has the contribution of different developmental teams which includes the system analysts who are analyzing how users interact with technology and businesses function by examining the inputting and processing of data and the outputting of information for improving organizational processes. Many improvements involve better support of users work tasks and business functions through the use of computerized information systems. So the system analyst must play the role as a consultant, a supportive expert and an agent for change.

The Business Analysts focuses on the business issues of the system. These include identifying the business value that the system will create, developing ideas and suggestions for how the business processes can be improved, and designing the new processes and policies in connection with the systems analyst.

The infrastructure analyst concentrates on the technical issues surrounding how the system will interact with the organization's technical infrastructure. They are also ensuring that the new information system conforms to organizational standards and identifying infrastructure changes needed to support the system.

The aim of the thesis: To develop the information system for automobile service with improved characteristics of its business process.

Thesis tasks:

1. To perform the analytical review of information system the business process organization.
2. To justify the sequence of operation in the business process of automobile service.
3. To develop an information system optimizing the business process.
4. Testing and implementing of the developed system.

The object of the research: optimizing business process based on information system.

Novelty of the results: The approach for business process optimization based on information system utilization has been further developed.

The practical significance: information system for business process optimization can help a company's reach it targets and goals.

Thesis approbation. The results have been reported at the V International scientific and technical conference of young researchers and students «Current issues in modern technologies», Ternopil, November 17-18, 2016.

The structure of the thesis. The thesis consists of explanatory notes, blocks diagrams and web applications and database presentations. The explanatory notes consists of introduction, 7 sections, conclusions,

references, and appendices. The thesis size: explanatory notes – pages of the A4 format, graphical presentation – 7 sheets of the A1 format.

MAIN CONTENT OF THE THESIS

In introduction the importance and actuality of the subject of the thesis have been represented.

In the first section analytical review of research method has been carried out. The analyst concentrates on the technical issues surrounding how the system will interact with the organization's technical infrastructure. They are also ensuring that the new information system conforms to organizational standards and identifying infrastructure changes needed to support the system.. Also the results of information system implemented and considered reaching the business goals.

In the second section This section is about the information system of the automobile service in which we discuss about business planning, business structure and business process reengineering which will enhance the possibilities of the organization reaching their goals and targets.

In the third section is the system designed using Microsoft Azure to ensure the improvement in cloud storage, new website design and more services added to the new website developed for the automobile service.

Forth section is a special part where I developed a system that can hold records of employees. In this parts was implemented so to reduce time wasting, and improve the services and monitoring of clients each employees will attend to.

Fifth section estimation of costs involved in designing the architectural structure of information system and estimation of budget and calculation of cost of goods sold for monitoring data exchange between information systems have been analysed.

In the sixth section is the problems of health and safety regulations. That is, the problems of electrical safety in the laboratory, static electricity and spark hazards etc. are considered.

Seventh section is about the environment which is the branch of biology that deals with the relations of organisms to one another and to their physical surroundings

Conclusions

1. The analytical review of the information system in business process optimization performed and analyzed, and the problem of the thesis stated.
2. Sequence of operation in the business process of automobile service has being justify to the activities which can be improved.

3. The information system for the automobile service has being developed.
4. The system has being implemented for the enterprise “ Rex Auto Repairs “ (LVIV)

LIST OF PAPERS PUBLISHED BY THE AUTHOR OF THESIS

1. Rexford Owusu. Information system for business process optimization in automobile service / Book of abstract of the VI International scientific and technical conference of young researchers and students «Current issues in modern technologies», Ternopil, November 16-17, 2017, vol.2. – Ternopil, TNTU Press. – 6 p.

ANNOTATION

Master's thesis is devoted to the development of Information system for business process optimization in automobile service. In the thesis presented a structure of this information system of system design analysis and business process optimization . As a result, the system was implemented so that the business will be making the best or most effective use of a situation or resource.

Keywords: Information technology, Information system, Business process and Reengineering, Business Process Optimization, Azure features.