Lab 1.   Specification of system requirements. Use Case diagram

Objective: To study the basic features for creating and editing use case diagrams

Tasks

1. Choose one of the company type from the excel list or use your own company type. In the course of the assignments, you will have to describe and suggest some business processes automating of the selected company.

2. Define list of high-level customer's needs, which going to be solved by the information system implementation. Not less than 5 customer's wishes in list.

Create Use Case diagram for the general company use cases. Diagram should include situation with at least two actors collaboration.

3. Create Use Case diagram image (png/jpeg/gif).

For UML diagram plotting you can use StarUML, draw.io or another available software tools.

Lab 2.   Specification of system requirements

Objective: To explore the possibilities to describe the requirements for the designed software

Tasks

1. Create valid IDEF0 diagrams for the general company processes up to 3d level detailing. At 3d decomposition level should be at least one process with at least two actors collaboration.

2. Create ppt-report with IDEF0 diagrams images.

For IDEF0 diagram plotting you can use:

- Ramus Educational (http://www.ramussoftware.com/en/index.php?option=com_docman&Itemid=6) does not work with moder JRE

- Microsoft Visio (not-Free)

- another available software tools.

Model level	Notation	
0	IDEF0	Top level A0, one block. Arrows show object connection with environment.
1	IDEF0	First level, contain top processes.
2	IDEF0	Second level, top processes decompositions.

3. The output images should be documented in a report file.

Lab 3. Class diagram

Objective: To study the basic features for creating and editing class diagrams

Tasks

1. Study the possibility of describing the static structure of the information system. Learn how to allocate in the system of the basic classes and describe their properties and behavior. Create Class diagram. Describe at least 5 classes with relations.

2. Create Class diagram image.

Lab 4.   Business Process Model and Notation (BPMN) diagram

Objective: To study the basic features to create and edit BPMN diagrams

Tasks

1. Create BPMN diagram for chosen business process, which include collaboration of at least 2 actors. Use BPMN notation (http://www.bpmn.org/)

2. Create ppt-report with BPMN diagram image.

For BPMN diagram plotting you can use Bizagi Modeler (http://www.bizagi.com/en/products/bpm-suite/modeler) or another available software tools

Lab 5.   Business process implementation

Objective: To study the business process implementation

Tasks

1. Create Cuba Platform project, which will implement business process from Lab 4.

Use Cuba Platform documentation (for example https://doc.cuba-platform.com/bpm-latest/bpm.html).

2. Create ppt-report with ER diagram image.