Master of Software Engineering Course: Software Methodologies Teachers: Luca Dan Serbanati & Andrei Vasilateanu

Mini-Project E-Team Building

E-Team Building is an information system for a company that is specialized in organizing team building events. The company's competitive advantage and its marketing point is maintaining a long term relationship with their clients and offering professional counseling and advice for the HR departments. The exercises focus on building team relationships and team leadership.

The company offers both in-site counseling and weekend events that take place in a mountain resort. For the in-site counseling, a member of the company goes to the client and holds communication exercises with a single team from the client company. The aims for the exercises are pre-established with the HR and the assessments after the exercise are also sent to the HR department.

For the events, usually most of the client company members come in the weekend to a mountain resort and they are organized in different teams than the ones they work into at office. The splitting into teams takes into consideration previous events so that two aims are followed: discover new talents by putting members into different roles than before and also strengthening a role, for example, strengthening the role of a new unit leader.

The system should maintain the list of clients and client personnel, with their assessments and history in previous events. The system must allow the owner to graphically view existing team structures and relations. The system must provide decision support in organizing an event, from booking the location to preparing the daily program for each team and instructor. The assessments are introduced by the instructors and validated by the team building company owner before being sent to the HR department of the client. Lastly the system should be interconnected with the HR departments IT systems in order to extract personnel files.

Work Packages:

A. WP1-Systems Engineering Methodology:

A1 Partition the current system according the processing and the processor views in a System Modeling Template

A.2 Draw the Architecture Flow Context Diagram for the system

B. WP2-Structured Methodology:

- B.1. Define the environmental and behavioral model for the information system
- B.2. Starting from the level 3 DFD, propose a design model based on transformational and/or transactional flows.

C. WP3-Enterprise Wide Methodology:

- C.1. Draw the activity diagrams for the main business process
- C.2. Map the enterprise organigram and specify the business functions of each division.

D. WP4-Object-Oriented Methodology:

- D.1. Draw the domain model for the business.
- D.2. Draw the Business Use Case Diagram
- D.3. Interaction diagrams for the main business scenarios
- D.4. For the software use case of **TBD** write the use case description, system sequence diagram and describe an operation using an operation contract.
- D.5.Propose a software architecture for the system, arguing for the design decisions you have made.
- D.6 Draw the statechart for a **TBD** object lifecycle.

TBD = to be decided: The task will be assigned by your tutor based on your project so far.