Final Assessment of Service Science (401077)
19 December 2014

Exam rules:
No books or reference material, mobile phones or other electronic devices.
The questions should be answered in **English**

Student Name:
Student Number:
Bachelor in:

Highest Possible Score: 90

Total number of questions: 9

Part 1. Business Services

1. Basic service terminology (10 points)
    Compared to physical goods, services have specific characteristics.
    a. One such characteristic of a service is heterogeneity. Explain the notion of heterogeneity. Also give an example. (5 points)
    b. Some people consider physical goods also as a kind of services. Argue, by giving an example, why goods can be considered as services. (5 points)
2. Service Strategy and Service Development. (10 points)
    For services, general theories about strategies can be used.
    a. According to M.E. Porter, three different types of strategies can be considered: (1) cost leadership, (2) Differentiation, and (3) Focus. Explain these three different types and give for each type an e-service example. (6 points)
    b. (e)Services (e.g. car maintenance) are often viewed as a supporting proposition in addition to some other product (e.g. a car). However, eServices can also be considered as the primary proposition. Exemplify at least one case of an eService where the eService is the primary proposition. (4 points)

3. The e3value technique. (10 points)
    As presented by the guest lecturer, in rural areas in Africa, it is difficult to send messages to a large group of people, e.g. by farmers who want to sell their products to customers.
    To this end, a new broadcasting service has been developed. Farmers, also called senders, connect to a service delivered by FarmerOnline. FarmerOnline exploits a voice response system that farmers use to deliver a spoken message that they want to broadcast. For doing so, farmers pay FarmerOnline a fee per broadcasted message. How farmers actually pay is outside the scope of this description. In order to deliver the message, farmers need a mobile phone with a pre-paid card for one of the mobile telephony operators in Africa. FarmerOnline has contracts with a number of

regional radio stations in Africa. If FarmerOnline is receiving a spoken message from a farmer, this message is delivered to the radio stations electronically for broadcasting, and in return FarmerOnline pays a fee to each radio station for broadcasting the message. Each radio station collects the received message, which are broadcasted to listeners. In general, the listeners obtain content from the radio station and offer their audience in return. The radio station uses the audience to attract advertisers, who buy air-time from the radio station.

Construct an e3value diagram for the above text. You need to show actors, market segments, value interfaces and port, value transfers and value objects. You need not to show value activities and dependency paths.

4. Service Quality. (10 points)
    SERVQUAL distinguishes the following quality properties: reliability, responsiveness, assurance, empathy, and tangibles.
    a. SERVQUAL has been developed with traditional services in mind, and not specifically eServices. Explain, by using an example, whether the SERQUAL properties are usable for eServices or not. (5 points)
    b. Discuss if SERVQUAL is usable for selecting services by a customer (5 points).

5. Globalization and growth of services. (10 points)
    Domestic growth of services can be accomplished by various strategies including focused service, focused network, clustered service, and diversified network.
    a. Explain each growth strategy and give for each strategy an example in the context of eServices.
    b. Traditional services (e.g. a haircut) and eServices are not the same from an ontological perspective. Argue that, as a company, is easier to reach growth full eServices compared to traditional services. (5 points)

Part 2. Web Services

6. Online Soccer Manager (OSM), the online game presented by the guest lecturers, is a soccer strategy game with more than a million players. Players can sign up in the OSM website, select a league, steam, and make different strategic decisions for the team. For example, buy and sell players, change line-up or tactics. OSM company decides to use the real-world information about the leagues such as the players, their photos, and the logos of the soccer clubs. To do so, they decide to integrate their OSM application with the applications of soccer clubs using web services. In this way the soccer clubs can automatically send the related information to OSM. (10 points)
    a. Explain how using web service technology, OSM can integrate with soccer club applications? (5 points)
    b. Considering that OSM and Soccer clubs are integrated using web services, indicate how they interact with each other. (5 points)

7. One of the main objectives of SOAP (Simple Object Access Protocol) is standardization; explain
   a. What is standardized by SOAP (5 points)
   b. Why standardization is needed (5 points)

8. Consider SENA (the intellectual property right company who provided your integrated assignment case) wants to create a web service that allows the right owners (artists and producers) to provide the actual music tracks and report the line-up (artists who played music in that track). Define informally and justify the operations and their input and output messages required for a web service that fulfills the following requirements: (i) collects the actual music tracks from the right owners (artists and producers), and (ii) Report Line-up for a track. (10 points)

9. For ordering goods a client application communicates with a supplier web service. The supplier web service publishes the conversations that it supports using coordination protocol shown in the Figure below. Considering this coordination protocol,
   a. Explain the allowed sequence of the message exchanges between the customer (client) and supplier (web service). (7 points)
   b. Explain what constraints does this coordination protocol impose on the internal business logic of the client code. (3 points)