SEBA Master - Web Application Engineering
Summer term 2016

Technische Universität München

Fakultät für Informatik
Lehrstuhl für Informatik 19

Exercise 1

The goal of this exercise is to present your business idea for a web application following the guidelines of the lecture. Thereby, you have to discuss which customer segments you are targeting, and which problems your web application actually solves. Furthermore, you have to describe four concrete use cases of your web application which are specific to your business idea.

The results of this exercise lay the foundation of the subsequent exercises. You will have to elaborate your results and implement the designed solution over the course of the upcoming exercises using the AngularJS and Node.js as announced in the first lecture.

1. Description of the Exercise

Find a business idea for your web application and elaborate which customer segments you are targeting, and which of their pains your web application will address. Please respect the following general constraints:

- Comply with current EU legislation and German laws (e.g. no drugs, no violation of copyright laws, no pornographic content).
- Differentiate yourself from existing solutions.
- Although choosing a concrete business model is **not yet** part of the exercise, keep in mind for the next exercise that your web application somehow has to generate revenue, i.e., it has to be self-sustainable.
- The web application has to run in a common web browser.

Please use the Value Proposition Canvas (VPC) as presented in the lecture to sketch out your business idea. The VPC is a visual template that will help you in developing your business idea by explicitly outlining the targeted **customer segments** as well as the **value proposition** of your web application. Furthermore, it serves as a foundation for the development of your business model based on the Business Model Canvas (BMC), which will be part of exercise 2.

Please familiarize yourself with the VPC if you have not used it yet (http://www.businessmodelgeneration.com/canvas/vpc). Furthermore, there is lots of material available on the web and in the library about the BMC which also covers the components of the VPC (e.g. *Osterwalder & Pigneur (2010): Business Model Generation: A Handbook for Visionaries, Game Changers, and Challengers*).

In addition to the description of your business idea, you also have to provide the description of **four distinct use cases** which are specific to your business idea. For example, if you develop an online shopping platform for shoes, searching for items based on specific facets (e.g., shoe size) is a specific use case, while registering or logging in to the system is certainly not.

The goal of those use case descriptions is to make clear how your web application actually provides the services as described in the VPC to the customers. Since over the course of the semester you have to implement a web application which supports those use cases, make sure that they have a reasonable and doable complexity.

2. Presentation Session

Right before your presentation, make sure that your **presentation notebook** is **prepared**, i.e., start the web application and a proper browser, and open your slides. Also make sure that your presentation and live demo works for lower resolutions (e.g., 1280x800). We can only guarantee a VGA-connection to the beamer, i.e., take care of respective adapters by yourselves!

Technische Universität München

Fakultät für Informatik
Lehrstuhl für Informatik 19

The presentation has to be composed of two parts: One about the VPC for your web application, and one about the descriptions of the four use cases as described in Section 1. Therefore, the structure of your presentation should be as follows:

- Short description of your team including your names, pictures, and fields of study. (1 slide)
- Description of customer segment
  - What are the specific jobs/tasks your customers want to do? (1 slide)
  - What are respective gains and pains as defined by the VPC? (1 slide)
- Description of value proposition
  - What are the concrete products and services your web application is offering? (1 slide)
  - What are your web application's gain creators and pain relievers as defined by the VPC? (1 slide)
- Brief description of each of the four use cases (1 slide per use case)

The presentation must not exceed 10 minutes. The subsequent discussion, will last additional 10 minutes at most.

The presentation of the slides has to be done by exactly two students. These two presenters will be assigned randomly immediately before the presentation. Therefore, make sure that each of the team members is familiar with the business idea, the use cases, and the presentation. However, in the discussion session, each team member might be asked and take part in the discussion.

3. Questioning Session

20 minutes before your presentation, your team has to be in the "Question room" (01.12.034) in order give a written answer to a randomly chosen question out of a public question catalog. The questions cover the content of the first two lectures.

The question catalog will be published on April 19th, 2016.

4. Deliverables

For this exercise, there are four deliverables which you have to submit:

1. A **Paper** (in PDF format) describing your business idea and use cases. This paper has to be structured as follows:
   - A one sentence pitch of your business idea:
     <insert name of your project/idea> is <a defined offering> to help <a defined customer segment> to <solve a problem> with <secret sauce>.
   - 1 page containing a sketch of the filled out VPC
   - Approx. 2 pages explaining the project idea based on the VPC structure, i.e., customer segment (including customer jobs, their gains and pains) and value proposition (including products & services, gain creators and pain relievers)
   - Approx. 1 page describing four distinct use cases which are specific to your business idea. For this, you can either describe the use cases textually, or you can also use UML use case diagrams
2. The **Presentation** (in PDF format) as defined in Section *2. Presentation Session*.
3. A **Paper** (in PDF format) describing the individual contribution to the exercise of each team member

Technische Universität München

Fakultät für Informatik
Lehrstuhl für Informatik 19

4. In addition to these deliverables which will be assessed, we also want you to submit a **team sheet** (in PDF format) containing basic team information as well as the names and pictures of the team members. There should also be sufficient space for taking notes for each team member as well the whole team, i.e., the sheet should look as follows:

Team <Team Nr>: <Web app name>	Team Notes		Exercise-Nr: ____
<Name of team member 01>	<Name of team member 02>	<Name of team member 03>	<Name of team member 04>

Respective MS Word as well as a PDF templates are available in Moodle.

Note: Those sheets will be used by the organizers to make individual notes during the presentation and discussion sessions. The pictures are only used internally to allow a mapping from the presenters to the names of the team members during the presentation. Of course, we won't publish them.

5. Submission of Deliverables

*   Deliverables must be sent via e-mail in PDF format. Recipient is: *seba-master.sebis@tum.de*.
*   The subject line must conform to the following format:
    "**[SEBA-Master] Exercise** *1 - Group number <Number of your group> - v<Version>*".
    Please replace the parts enclosed in <> (and delete thereafter the symbols '<' and '>').
*   The e-mail body must contain the following information about each group member:
    *   last name,
    *   first name,
    *   matriculation number,
    *   your project group number
*   The e-mail with the highest version number before the deadline is considered as final.

Only submissions conforming to the stated form will be accepted.

Submission deadline for the first exercise is Monday, April 25th, 2016, 12:00 (noon).

6. Evaluation

The exercise is evaluated according to the following guidelines:

- Documents and slides were delivered in time (before deadline)
- Quality and structure of the business idea according to the guidelines of the lecture and the VPC
- Individual contribution of each team member to the exercise
- Style and structure of the document
- Presentation of the slides
    - Make sure to comply with the schedule. Overtime (exclusive interruptions due to questions) will affect your assessment negatively!
- Style of presentation
    - Presentation skills (confident appearance, fluent speech, etc.)
    - Dealing with short interruptions and questions
    - Slide design and appearance (no animations, pleasant colors, "corporate design", etc.)
- Correctness of the submitted answer in the questioning session.

This exercise is worth **23 points**:

- 8 for the questioning session
- 2 for the presentation
- 13 for the deliverables

In total, there are 100 points over the course of the semester.

7. Outlook

In the second exercise, you will have to provide a complete business model according to the business model canvas as well as mock-ups of your web application. Thereafter, you have to implement a working prototype of your web application.