

# Phase 2 – SEG3125 Project

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## *User, Task and Domain Analysis*

Phase	Activities	Due date	Weight
Phase 1	Proposal	DONE	0%
Phase 2	User, Task and Domain Analysis	June 17 <sup>th</sup>	25%
Phase 3	User Interface Design	June 29 <sup>th</sup>	25%
Phase 4	Implementation and lab demo	July 20 <sup>th</sup>	15%
	In class presentation	Starting week of July 20 <sup>th</sup>	15%
	Final Report	August 4 <sup>th</sup>	20%

## Introduction

In this phase, you will work on the user, task analysis and domain analysis. You will generate a report detailing the results of these activities. The information you need to include in your report is detailed in various sections throughout this document. To draw your attention to these sections, the following icon is used:



These activities will set the stage for the next phase: **User Interface Design**.

## User Analysis

In order to perform **User Analysis**, you must:

1. Choose at least two representative users (that already use an earlier version of your application, a similar application or might be interested in your application). These can be your classmates, friends or any generally interested users.
2. Choose one or more techniques to collect information about your users. Typical techniques we have discussed in class include:
  - **Questionnaires or surveys:** send your users paper form questionnaires or online surveys. Be careful about the clarity and appropriateness of your questions (**they cannot be offensive**). Ensure that you pilot the questionnaires or surveys (get a trusted person to fill them up first before sending them to your users).
  - **Interviews:** setup individual or group interviews with your users. Ensure that you prepare your questions well ahead of time. Rehearsing a mock interview is a very good idea.
  - **Observation sessions:** if you have access to users that already use an earlier version of the program, a similar program or currently carry out their tasks manually, setup observation sessions to monitor them perform their work.

3. Identify one or more user classes and create profiles for each one of them. If you find that a user class represents the whole (or a large portion of the) population, divide it into several ones in order to refine your classes. Follow the same ideas we have presented in **Lecture 5**. In particular, your user profiles should contain information about some (or all) of the following user characteristics:
  - Age
  - Gender
  - Cultural background
  - Language
  - Education level
  - Physical limitations and disabilities
  - Computer experience
  - Domain experience
  - Application experience
  - Motivation and attitude
  - Work environment
  - Relationships to other users in their organization and typical communication patterns (can users ask each other for help? are they isolated?)

*Include any other user characteristics that you judge to be important for your application but were not included in the list. You can use personas in order to describe your user classes or simply a chart similar to the one presented in **Lecture 5**.*

**In your report:** 

- Describe the techniques you have used to collect information about your users
- Attach printouts of questionnaires and surveys (if technique was used). Include a list of interview questions asked (if technique was used)
- Describe your user classes or personas

## **Task Analysis**

**If your users** (the ones you have identified previously) **already perform the tasks** for which you are creating a software application, then you must:

1. Choose one or more techniques to collect information about the tasks:
  - **Observation sessions**
  - **Interviews**
  - **Questionnaire or surveys**
  - **Contextual inquiry:** a combination of an observation session and an interview. You will sit down with your users as they perform their work and act as an apprentice (trying to learn how they perform tasks). Ask them questions about why they do things the way they do. Also, ask them about ideas to optimize their work (users sometimes have very good insights on how to make things better).

- **Logs (difficult):** if you have access to detailed logs on the application they currently use, you can retrieve information about the tasks that are more important and the typical problems faced.
- 2. Describe the tasks identified using text or a graphical model (flow charts or hierarchical diagrams). Furthermore, identify the subtasks involved in every task. It might be prudent at this point to attempt to optimize each task by removing unnecessary sub-tasks (or reorganizing sub-tasks). Refer to **Lecture 5** for more information about the latter procedure.

**If your users** (the ones you have identified previously) **do not perform the tasks** for which you are creating a software application, then you must:

1. Identify a list of key tasks that you think are important for your users.
2. Identify sub-tasks and create a model for each task (e.g. flow chart, hierarchical diagram...)
3. Setup a brainstorming session with the users where you will show them the graphical model of each task, describe to them the sub tasks and ask about their opinion. Rework together with the user your task models (if necessary).

**In your report:** 

- Describe the techniques you have use to collect information about the tasks
- Attach printouts of questionnaires and surveys (if technique was used). Include a list of interview questions asked (if technique was used)
- Include a list of all the tasks identified and a model for the most important 3 to 5 tasks

## Domain Analysis

In order to perform **Domain Analysis**, you must:

- Create a small dictionary for the jargon used in the problem's domain (if necessary)
- Identify the important entities of the domain
- Create an Entity Relationship Model or a UML Class diagram (each entity represented as a class) in order to highlight the relationship between the various entities

**In your report:** 

- Include the dictionary (*if you created one*)
- Identify the various principle entities in your domain
- Include any model you have created to represent your domain