

ISYS 431

Assignment 1 – System Categories & System Analysis

Part I

The purpose of this exercise is for you to think through major information system categories.

Describe four different types of realistic business information. You may respond by writing in the table below. You will want to do outside research to gain understanding of these types of systems through examples. Use these references to support your points.

- i. The type of the system (already provided for you in the table)
- ii. Its purpose
- iii. The typical user(s) of the system and their means of interacting with it
- iv. The input data used by the system
- v. The system's output

In selecting the systems to describe, give preference to those systems that are customer focused and user-oriented. E.g., avoid embedded systems, operating systems, utility systems such as a registry repair systems, etc., where either the user is either absent or understanding of the internal workings of the system is required.

Notes/Hints:

- One way to approach to some of these parts is to think about a midsize or large business that you know, and try to identify the type of information system it uses. Do some research around these businesses and the systems they use.
- Make sure to clearly differentiate the systems. For example, I want to see that you understand the key differences between executive information systems and decision support systems, avoid overlaps.

Important Note: Seven systems are listed in the table on the following page; you are to **choose just four of these** systems in your response.

i) type of the system	ii) its purpose	iii) typical user(s) of the system and their means of interacting with it	iv) input data used by the system	v) system's output
(a) Transaction processing system	Example excerpt: processing credit card sales	Example excerpt: the system user is a customer who uses it by swiping the credit card through a card reader	Example excerpt: <ul style="list-style-type: none"> • time and location of the transaction, • credit card type, • credit card number, • authorization number from the credit card provider, • product purchased 	Example excerpt: <ul style="list-style-type: none"> • New credit card balance • Approval notification
(b) Management information systems				

(c) Decision support systems				
(d) Executive information systems				
(e) Expert systems				
(f) Communications and collaboration systems				
(g) Office automation systems				
(h) Enterprise systems				

Part II

The purpose of this exercise is to have you think about the major parts of system analysis, and thereby to help you appreciate what issues system analysis needs to address.

EagleEyeExams, a company which proctors final exams on-site wants to provide web based services. This would enable universities and schools to provide their students the capability to have their exams proctored and monitored remotely through EagleEyeExams. EagleEyeExams would need to partner with various LMS (Learning Management Systems) as the exams would be completed by the test takers within the LMS itself. EagleEyeExams would utilize cameras and microphones to both verify the test taker's identity and to monitor the exam. EagleEyeExams would need to run on both traditional and mobile environments.

Use the basic methodology as follows, in a maximum of two single space pages, one inch margins with a 12-point providing the following:

1. Mission Statement
2. Functional System Requirements
3. System-Level Use Case
4. System-Level Quality System Requirements
5. System-Level Constraints

The course will examine these topics in detail during the next several weeks. Your write-up for this exercise is not expected to be formal or in complete detail.

Notes/Hints:

- The mission statement must give a high level context and scope for the system. A good place to start is to research mission statements of systems that you use. Think about key functionality and who the main users are. The mission statement should be about a paragraph in length.
- Functional, quality system requirements and system level constraints should be written in short paragraphs, each discussing one topic only.
- Be sure that you understand the difference between a functional requirement (step 2), quality requirement (step 4) and system constraints (step 5).
 - The functional requirements should describe only what the system does – not design decisions for implementing these requirements.
 - Design decisions are non-functional quality requirements and constraints, for example: using a particular laptop, programming language, GUI layouts, or encryption method should be documented as *constraints* (step 5) and not as functional requirements.
- System-level use case may repackage information contained in the functional requirements in a different format: a scenario-like sequence of user actions and system responses. It is common to have one use case for each overall functional system operation.

- Be sure to spend time to review your response iteratively going back to previous sections. For example, once you complete system requirements, use cases, and constraints, make sure that they are consistent and that the Mission Statement provides a top level overview.

Organizing Your Response

You will want to organize your response as a paper write-up. The following are suggestions to a clearly organized response.

- Be sure to include your name in your assignment solution.
- Make sure to use proper referencing in your paper. I suggest the APA format, but other formats are fine as long as it's clear in distinguishing your work from work of others in your response, be mindful of plagiarism rules.
 - Make sure to include a reference page, but also show how these references are used within your response.
- Include your last name in the file name of the assignment submission.
 - (Example: JoeSmith_Assignment1.docx)