**Assignment 1**

**Position Paper**

What is a System Analyst? What does a System Analyst do?

Without proper preparation, any system is doomed to fail, as we are all well know. It leads to widespread customer dissatisfaction and, ultimately, the system's demise. System analysis and design, the process of assessing, creating, and enhancing a system to better meet the needs of its end users, is clearly important in this context. Surely no one in their right mind would do it. An expert system analyst might be helpful here. Someone who uses System Analysis and Design methods to address a systemic issue is called a System Analyst. They help system users and other firm managers determine what information services they require. Users are interested in learning what information is required by the system to evaluate data input, data transformation, data storage, and information output. To learn more about System Analysts, let's delve into this topic.

A systems analyst is an expert in the field of information technology (IT) who works to improve processes through the study, design, and implementation of computerized systems. An information system's viability is evaluated by a systems analyst, who then coordinates efforts between clients, developers, and other stakeholders to produce the desired results. A systems analyst is someone who applies analytical and design processes to IT to address business needs. System analysts may play a pivotal role in driving organizational transformation by identifying areas for improvement, developing strategies for putting those strategies into action, and educating and inspiring staff to adopt the new ways of working. It is common for a systems analyst to collaborate with a business analyst, who specializes in analyzing larger business processes, but who is limited to working on a single system. Although there is some crossover between these functions, they are distinct. A systems analyst is relied on by a business analyst to dive deeply into the technical aspects of a solution, while the business analyst is responsible for evaluating the business requirement and identifying the suitable solution and, to some degree, designing a solution. A systems analyst's duties frequently include checking the quality of code, analyzing scripts, and making minor adjustments to them.

Valacich and George [Valacich & George 2020] discusses the approaches- structured and agile and they emphasize the usage of a consistent set of procedures known as a systems development methodology in organizations. The system development methodology is a framework that is used to organize, design, and control the processes of constructing an information system. In many businesses, the systems development life cycle (SDLC) is a standard approach for system development; it includes multiple phases that track the progress of the systems analysis and design process. Valacich and George [Valacich & George 2020] also discuss the primary phases which are - Planning, Analysis, Design, Implementation, and Maintenance. These phases are a circular process in which the end of one system's useful life leads to the start of a new project to produce a new version or to completely replace an old system.

The original software development life cycle (SDLC) model was the waterfall approach. Indeed, it was the pioneering model for the software industry. The output from one phase is fed into the input of the next. In the waterfall model, one stage had to end before the next one could start. Because of this, the waterfall model's stages are highly precise and well-defined. The phases of the waterfall model progress from top to bottom, like a waterfall. Then, where did we go wrong? Users or consumers' roles in the system were defined in great detail. In many cases, the user's role was delegated to the project's requirements determination or analysis phase, where it was presumed that all requirements would be available up front. This presumption reinforces the waterfall model's propensity to lock in requirements too early, even after business conditions have changed. Furthermore, Failure to pay enough attention to good analysis and design is the outcome of prioritizing meeting milestone deadlines above receiving and assessing input from the development process. A focus on achieving deadlines leads to subpar systems that consumers are unhappy with and that need frequent updates, driving up unnecessary costs in the development process. Prioritizing meeting deadlines over doing a decent job might lead to unnecessary rework. As a response to these challenges, professionals in the field of systems development began to experiment with novel methods for doing systems analysis and design.

The foundation for accomplishing the team's long-term objectives, day-to-day tasks, and everything in between is project management. A project manager is a type of systems analyst whose job it is to start, plan, carry out, and finish a project. The candidate's skillset is comprehensive, including management, leadership, technical know-how, the ability to resolve conflicts, and the art of cultivating lasting relationships with customers. When you're a project manager, you're always adapting to new situations and solving problems. The administration of a project to create a new information system is the most important aspect of the whole endeavor. Like the SDLC, project management consists of distinct stages. Initiating a project, developing a strategy, carrying out the plan, keeping tabs on progress, and wrapping up the work under control are the five fundamental steps in a typical project management cycle.

The beginning of a project is where an idea gets formalized into an overarching goal. At this point, you should be building a business case and characterizing the project broadly. One way to do this is to draft a project charter after identifying the need for the project. The second step is project planning, which requires careful consideration of every aspect because it serves as a road map for the entire undertaking. The second phase of project management typically takes up roughly half of the overall time required for the project, unless we are using a modern project management methodology such as agile project management. In the third phase, "project execution," the team actually does the task. A project manager's responsibilities include developing effective processes and keeping tabs on the team's progress. During this time, the project manager is also responsible for maintaining fruitful collaboration among the project's various stakeholders. This guarantees that everyone is on the same page and that the project can be carried out without a hitch. There is no strict chronology between stages 3 and 4 in PMP. Concurrent with the execution phase, the monitoring and control phase checks that the project is on track to complete its goals and deliverables. An effective project manager will develop Critical Success Factors and Key Performance Indicators to guarantee that the project stays on track. Closing out a project signifies the end of the project management life cycle. After all deliverables have been made, the project enters the closure phase. From time to time, a certain project will necessitate the contracting of outside expertise. The project manager must complete the necessary papers to terminate these agreements.

Systems analysts need not be computer experts, but they should be comfortable with technology and eager to learn new things in order to do their jobs. Introducing a new computer system is the standard method of resolving the "problem." Systems analysts aid businesses in overcoming challenges such as not receiving orders from customers around the clock, not receiving supplier discounts and reducing inventory holding costs, not anticipating customer needs based on buyer trends, not allowing employees sufficient autonomy in their benefit plans, etc. A systems analyst use standard approaches to solving problems. The analyst employs a multi-step process to thoroughly investigate and resolve the issue. Research and understanding the issue, weighing the benefits of a solution against any potential drawbacks, determining what is needed to solve the problem, brainstorming potential solutions, selecting the best one and making a recommendation, outlining the particulars of the chosen solution, putting it into action, monitoring progress, etc., are all possible steps. Understanding the issue at hand is important before a new information system can be successfully implemented. Systems analysis centers on figuring out and specifying the steps necessary to fix a problem. Numerous options may be considered while attempting to solve a problem. A thorough search and evaluation of these possibilities is required. Multiple factors are taken into account before deciding on a course of action. The best option maximizes positive outcomes while minimizing negative ones. Before implementing the selected strategy, it is first thoroughly specified. It's vital to monitor the new system closely once it goes live.

What, in light of the foregoing, do you think are the most important qualities of an ideal System analyst? In my opinion, these are expertise in one or more of the following areas: technology, business, and people. Knowledge of tools that help developers create models and other project components, as well as methods for executing certain system development tasks, is crucial. Systems analysts need to know how businesses are structured in order to do their jobs effectively. It's not enough to know the ins and outs of accounting, finance, manufacturing, marketing, HR, and customer service; you also need to be familiar with how businesses are structured and managed. Systems analysts must be well-versed in human behavior and possess a wide variety of interpersonal skills because they regularly work in development teams with other individuals.

References:

• Joseph Valacich and Joey George, Modern Systems Analysis and Design, 9th Edition, Pearson, 2020

• https://www.softwaretestinghelp.com/what-is-sdlc-waterfall-model/ • https://www.w3computing.com/systemsanalysis/need-systems-analysis-design/

• https://www.cerritos.edu/dwhitney/SitePages/CIS201/Lectures/IM-7ed-OnlineChapterA.pdf • https://kissflow.com/project/five-phases-of-project-management/ • https://monday.com/blog/project-management/guide-to-project-management/