# Chapter 2: Analysis

## 2.1 Introduction

The analysis is the process of requirement gathering for the successful completion of projects. All needs, requirement of the project are gathered, studied and analyzed for making the further process more efficient and easy. As for analysis, there are different techniques for gathering requirement. But I am choosing Survey for gathering requirement because of its capabilities for representing a huge number of population, low price and its convenient way of data gathering.

The analysis is the most important phases in every project so as for my projects its importance is:

1. It helps to transform or converts the needs and standard level of requirements of the company into complete, measurable and testable requirements.
2. Helps to study the feasibility of the projects by gathering the required information.
3. Helps to understand the problems faced by the company and user then searching alternative solutions to overcomes those problems.
4. It helps in the estimation of cost, time and skilled manpower that required for completing the project successfully.

## 2.2 Analysis Methodology

There are different types of analysis methodology. But I have chosen **Hard Approach to Systems Analysis** and among it, I have chosen **Structured Systems Analysis and Design Methodology(SSADM)**.

Some advantage of using SSADM is:

1. As it uses the waterfall model each step were completed before starting the next steps. Which ensure that every procedure related to every step are undertaken.
2. Progress of every step can be measured easily by the help of objectives defined for each step

The disadvantage of using SSADM:

1. SSADM lacks flexibility because if the requirement is not gathered and identified correctly or need any changes later in the project, then it will cost highly to repeat the requirement stages or to return it may not be possible.
2. SSADM only focus on technical requirements so there is very limited involvement of the user.

SSADM follow six steps and if all these steps are done thoroughly it can help to produce accurate information and well-documented system. The six steps are:

1. **Feasibility Study:** Feasibility study decided and examines. If a project is socially, technically, and financially feasible or not.
2. **Analysis and Requirement Specification:** Software, hardware and other details requirements of the system are analyzed. Business activity model is developed, define and investigate requirements and the logical views of the current system is obtained
3. **Design:** Design of all the aspect of the system like a behavioral, structural, user interface (UI) and database design are done.
4. **Implementation:** Once the project is completed and the system is ready. Then the system is deployed to the company either directly or running with the existing system in parallel until the new system is working successfully.
5. **Testing:** Testing is done when the development of the system is finished. It ensures that whether or not the functionality integrated to the system is working or not and it also ensure if there are other errors.
6. **Documentation:** After the system is completed then it is documented mentioning all the works and things that were done during the development of the system.

## 2.3 Feasibility Study

A feasibility study is a study that is used to measure or finds out whether the project is feasible in all the relevant factor before it has been developed. Some relevant factor that the feasibility study addressed is technical, cultural, economic, operational and schedule.

Since it is part of the analysis it plays an important role in completing the project successfully which are:

1. By identifying almost all the project related problems and providing alternative solutions.
2. It also helps to know the level of acceptance of the project by the users before the project finished.
3. It also helps to know if it is worth to invest in the projects or not.

There are different types of the feasibility study. Some of them are:

1. **Technical Feasibility:** Technical feasibility is the study about whether the technical resources required to undertake the projects successfully are available or not. It also analyzed if the existing technologies in the company can execute or support the system after it has been developed.
2. **Cultural Feasibility:** This is one of the feasibility studies that help to know whether there will be a positive or negative impact of the project on both local and general culture.
3. **Economic Feasibility:** In this feasibility whether the project is economically feasible or not is measured or identified. That means do the profit gain from the new system exceeds or greater than that of the cost required to develop a new system.
4. **Operational Feasibility:** This feasibility study identifies certain problems, its importance in the project and alternative solution to solve. It also analyzed whether the developing system is easier for users than the existing system.
5. **Schedule Feasibility:** The most important feasibility study for the successful completion of the project. It allocates time for the different module development and measure if there is time available to do the project. It also determines whether or not the project can be completed within the given deadline.