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### **About the Tutorial**

Business Analysis is a subject which provides concepts and insights into the development of the initial framework for any project. It holds the key to guide key stakeholders of a project to perform business modelling in a systematic manner. This tutorial provides a brief overview of the concepts of business analysis in an easy to understand manner.

### **Audience**

This tutorial is meant for aspiring business analysts, and project owners or business owners, coordinators and project team members who often work closely with business analysts.

In addition, it will also be useful for anyone who is involved in capturing, writing, analyzing, or understanding requirements for Information Technology solutions, including Subject Matter Experts (SME), Business Process Managers, and Business Process Users.

### **Prerequisites**

To understand this tutorial, it is advisable to have a foundation level knowledge of business scenarios, process and domain knowledge pertaining to a few industries.

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### **Table of Contents**

	About the Tutorial	i
	Audience	i
	Prerequisites	i
	Copyright & Disclaimer	
	Table of Contents	ii
1.	BUSINESS ANALYSIS – INTRODUCTION	1
2.	SOFTWARE DEVELOPMENT LIFE CYCLE	4
	Post SDLC Process	6
	Role of Business Analyst during SDLC Process	7
3.	ROLES OF BUSINESS ANALYSTS	8
	Major Roles of a BA	8
	Key Responsibilities of a Business Analyst	9
	What a BA is Expected to Deliver?	10
4.	BA TOOLS AND TECHNIQUES	12
	Functional and Non-Functional Requirements	12
5.	JAD SESSION	14
	Use of a JAD Session	14
	Participants in a JAD Session	14
6.	REQUIREMENT GATHERING TECHNIQUES	16
7.	FUNCTIONAL REQUIREMENTS DOCUMENT	18
	Functional Requirements Deliverables	18



8.	SOFTWARE REQUIREMENTS SPECIFICATION	20
9.	USE-CASES	22
	What is a Use-Case?	22
	Benefits of a Use-Case	22
	The Anatomy of a Use-Case	22
	Guidance for Use-Case Template	23
	Use-Case Definition	23
10.	USE-CASE DIAGRAMS	26
	Drawing Use-Case Diagrams	26
	Example – Withdrawal Use-Case	28
	Use-Case Template	31
11.	REQUIREMENTS MANAGEMENT	32
	Why Projects Fail	32
	Why Successful Teams do Requirements Management	32
	Let's Start with the Basics	33
	Collaboration & Buy- In from Stakeholders	34
12.	PLANNING GOOD REQUIREMENTS	36
	Requirement Gathering and Analysis	36
	Eliciting Approach	37
	Different Types of Requirements	37
	Traceability & Change Management	39
	Idea Requirements Design Test Business Objectives	40
	Quality Assurance	40
	Obtaining Requirements Signoff	41



13.	BUSINESS MODELLING	.42
	Purpose of Business Modelling	42
	Performing GAP Analysis	43
	To Assess Proposed System	44
	Guiding Principles for Business Modelling	44
	Example of BA role in Modelling ERP Systems	44
	Functional Business Analyst	45
	Other Major Activities	45
	Tool 1: Microsoft Visio	46
	Tool 2: Enterprise Architect	48
	Tool 3: Rational Requisite Pro	49



### 1. Business Analysis – Introduction

### What is Business Analysis?

Business Analysis is the set of tasks, knowledge, and techniques required to identify business needs and determine solutions to enterprise business problems. Although, the general definition is similar, the practices and procedures may vary in various industries.

In Information technology industry, solutions often include a systems development component, but may also consist of process improvement or organizational change.

Business analysis may also be performed to understand the current state of an organization or to serve as a basis for the identification of business needs. In most cases, however, business analysis is performed to define and validate solutions that meets business needs, goals, or objectives.

### Who is a Business Analyst?

A business analyst is someone who analyzes an organization or business domain (real or hypothetical) and documents its business, processes, or systems, assessing the business model or its integration with technology. However, organizational titles vary such as analyst, business analyst, business systems analyst or maybe systems analyst.

### Why a Business Analyst?

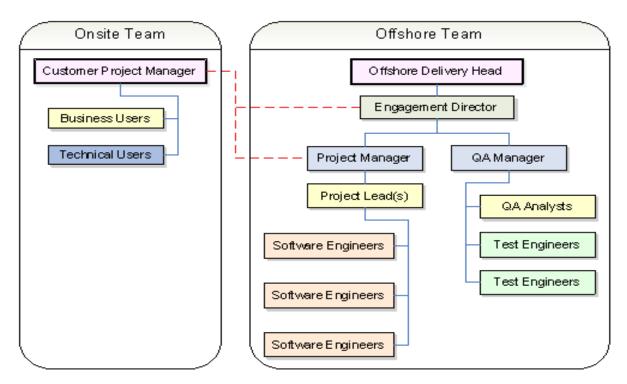
Organizations employ business analysis for the following reasons:

- To understand the structure and the dynamics of the organization in which a system is to be deployed.
- To understand current problems in the target organization and identify improvement potentials.
- To ensure that the customer, end user, and developers have a common understanding of the target organization.

In the initial phase of a project, when the requirements are being interpreted by the solution and design teams, the role of a Business analyst is to review the solutions documents, work closely with the solutions designers (IT team) and Project managers to ensure that requirements are clear.

In a typical large-size IT organization, especially in a development environment, you can find On-site as well as offshore delivery teams having the above-mentioned roles. You can find a "Business Analyst" who acts as a key person who has to link both the teams.





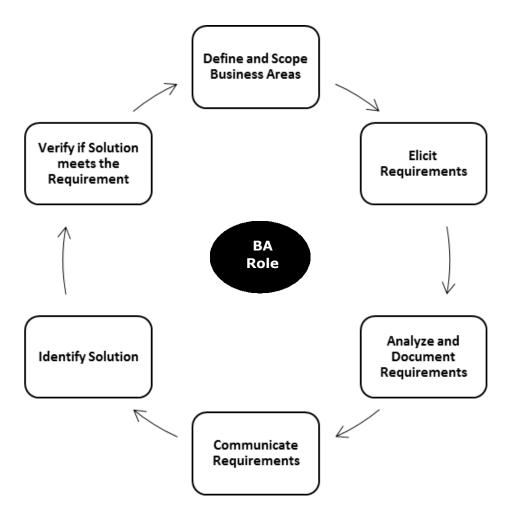
Sometimes, he would interact with Business users and at times technical users and finally to all the stakeholders in the projects to get the approval and final nod before proceeding with the documentation.

Hence, the role of BA is very crucial in the effective and successful jumpstart for any project.

### **Role of an IT Business Analyst**

The role of a Business analyst starts from defining and scoping the business areas of the organization, then eliciting the requirements, analyzing and documenting the requirements, communicating these requirements to the appropriate stakeholders, identifying the right solution and then validating the solution to find if the requirements meet the expected standards.





#### How is it different from other Professions?

Business analysis is distinct from financial analysis, project management, quality assurance, organizational development, testing, training and documentation development. However, depending on the organization, a Business Analyst may perform some or all these related functions.

Business analysts who work solely on developing software systems may be called IT business analysts, technical business analysts, online business analysts, business systems analysts, or systems analysts.

Business analysis also includes the work of liaison among stakeholders, development teams, testing teams, etc.

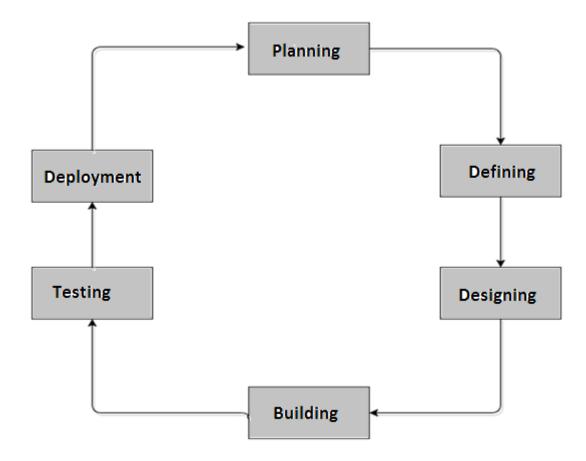


### 2. Software Development Life Cycle

Software Development Life Cycle (SDLC) is a process followed in a software project, within a software organization. It consists of a detailed plan describing how to develop, maintain, replace and alter or enhance specific software. It defines a methodology for improving the quality of software and the overall development process.

- SDLC is a process used by IT analysts in order to develop or redesign high quality software system, which meets both the customer and the real-world requirement.
- It takes into consideration all the associated aspects of software testing, analysis and post-process maintenance.

The important phases of SDLC are depicted in the following illustration:



### **Planning Stage**

Every activity must start with a plan. Failing to plan is planning to fail. The degree of planning differs from one model to another, but it's very important to have a clear understanding of what we are going to build by creating the system's specifications.



### **Defining Stage**

In this phase, we analyze and define the system's structure. We define the architecture, the components, and how these components fit together to produce a working system.

### **Designing Stage**

In system design, the design functions and operations are described in detail, including screen layouts, business rules, process diagrams and other documentation. The output of this stage will describe the new system as a collection of modules or subsystems.

### **Building Stage**

This is the development phase. We start code generation based on the system's design using compilers, interpreters, debuggers to bring the system to life.

### **Implementation**

Implementation is a part of the Building Stage. In this phase, we start code generation based on the system's design using compilers, interpreters, debuggers to bring the system to life.

### **Testing Stage**

As different parts of the system are completed; they are put through a series of tests. it is tested against the requirements to make sure that the product is actually solving the needs addressed during the requirement phase.

- Test plans and test cases are used to identify bugs and to ensure that the system is working according to the specifications.
- In this phase, different types of testing like unit testing, manual testing, acceptance testing and system testing is done.

### **Defect Tracking in Testing**

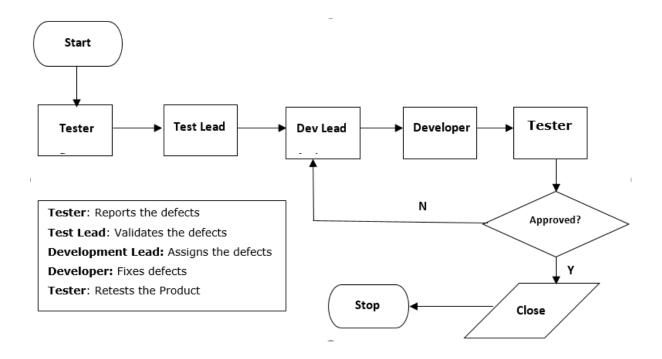
Software test reports are used to communicate the results of the executed test plans. This being the case, a report should contain all test information that pertains to the current system being tested. The completeness of reports will be verified in walkthrough sessions.

Testing for a project seeks to accomplish two main goals:

- Detect failures and defects in the system.
- Detect inconsistency between requirements and implementation.

The following flowchart depicts the **Defect Tracking Process**:





To achieve the main goals, the testing strategy for the proposed system will usually consist of four testing levels.

These are unit testing, integration testing, acceptance testing, and regression testing. The following subsections outline these testing levels, which development team roles are responsible for developing and executing them, and criteria for determining their completeness.

### **Deployment**

After the test phase ends, the system is released and enters the production environment. Once the product is tested and ready to be deployed it is released formally in the appropriate market. Sometime product deployment happens in stages as per the organization's business strategy.

The product may first be released in a limited segment and tested in the real business environment (UAT- User acceptance testing). Then based on the feedback, the product may be released as it is or with suggested enhancements in the targeting market segment.



### **Post SDLC Process**

After the product is released in the market, its maintenance is done for the existing customer base.

Once in the production environment, the system will suffer modifications because of undetected bugs or other unexpected events. The system is evaluated and the cycle is repeated for maintaining the system.



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