

TEST Management



LEARN IN ONE DAY

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Learn TEST Management in 1 Day

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Chapter 1: Role & Responsibilities of Test Manager / Test Lead

Your company, a financial corporation, built up a banking website. This is the biggest software project ever in your company & your boss wants the **highest quality** product.



The development team worked so hard to make the website. Now this website is setup at server. <http://demo.guru99.com/>

However, they are not sure **how effectively** it will work when launched in **real business** environment.

Your boss assigned you as **Test Manager** of the project. Your task is to verify and evaluate the quality of website Guru99 Bank before delivering it to the customer.

If this is the first time you have taken in-charge as a Test Manager, you may ask some following questions

What

- **What** is the role of Test Manager in the project?

Why

- **Why** does the project need a Test Manager?

How

- **How** can I build and lead a Testing Team effectively?

This tutorial series will help you to answer above questions. You will have a chance to become a Test Manager of the real project Guru99 Bank.

Before kicking off the project, you should know the basic concept of the Test Management answered with following series of questions -

What is Test Management?



An important part of software quality is the process of **testing** and **validating** the software.

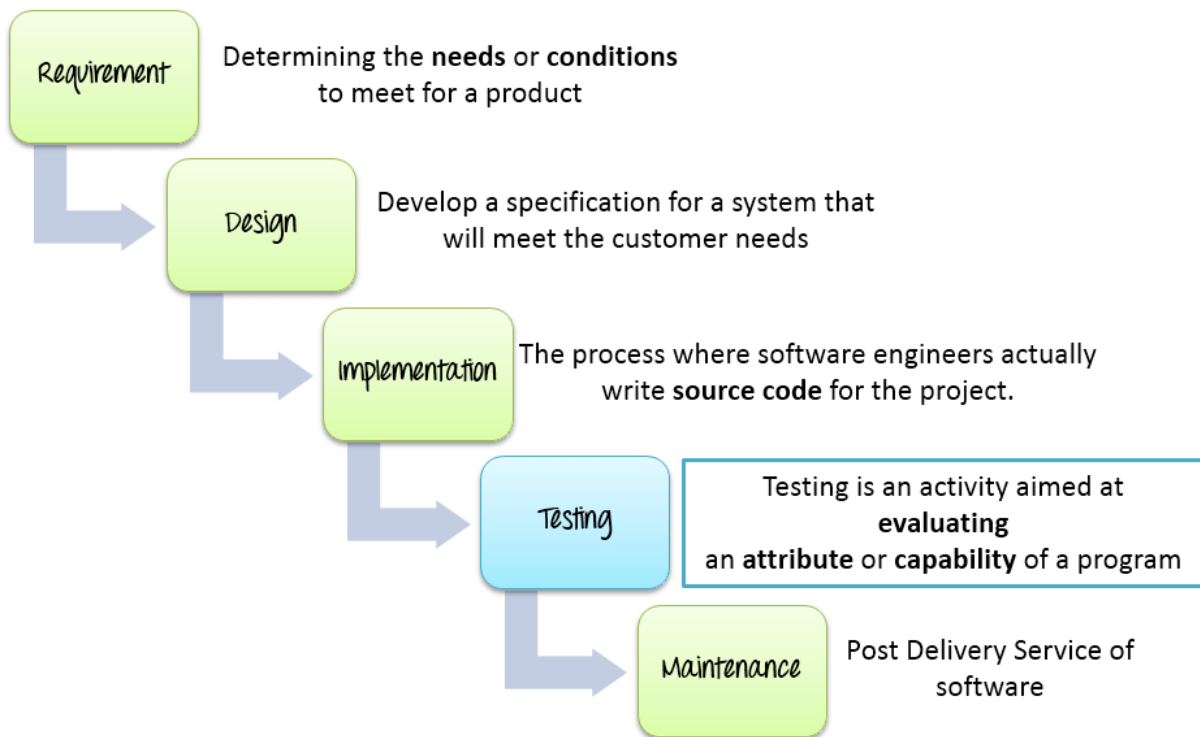
Test Management is the practice of

- **Organizing** and **controlling** the Testing process.
- **Ensuring visibility, traceability, and control** of testing process to deliver high-quality software.

Why do we need a Test Manager?

The role of Testing in software development Life Cycle

The following figure shows the position of Testing in Development process



In above waterfall model, software testing is one of the phases of the software development lifecycle (SDLC). The Testing phase plays an important role and a key factor in SDLC, which helps to improve the **quality, reliability & performance** of the software system.

Let's take a look at advantages of software testing in the Software Development Life Cycle:

- Improves the **quality, reliability & performance** of the system.
- Produces **good quality** product in the competitive market.

We cannot deny that Test Management is a key role because the result of it affects the success of the project. Therefore, to create an

effective testing process, we need a good **Test Manager**

What is the Role and Responsibility of Test Manager?

The role of the software test manager is **to lead** the testing team. Test Manager plays a **central role** in the Team.

Roles & Responsibility Test Manager



The Test Manager takes **full responsibility** for the project's success. The role involves quality & test advocacy, resource planning & management, and resolution of issues that impede the testing effort.

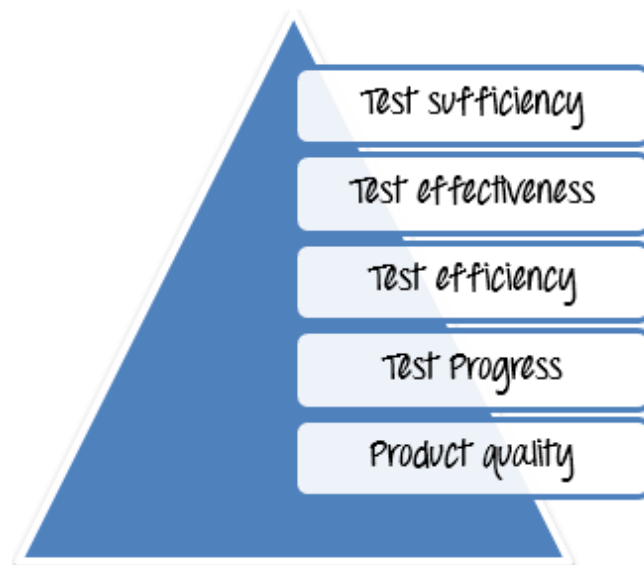
The Test Lead / Manager is responsible for:

- **Building** up and **leading** the Testing Team to the success of project
- **Defining** the scope of testing within the context of each release / delivery
- **Deploying** and **managing** resources for testing
- **Applying** the appropriate test measurements and metrics in the product and the Testing Team
- **Planning, deploying** and **managing** the testing effort for any given engagement.

The Test Manager must understand how testing fits into the organizational structure, in other words, clearly define its role within the organization.

What are the challenges in Test Management?

Being a Test Manager, you must **guarantee** all the following requirements:



There are tons of difficulties and challenges you will face when leading a project. Here are some typical issues:

- Not enough **time** to test
- Not enough **resources** to test
- The project **budget** is low, and **schedule** is too tight
- Testing **teams** are not always in one place
- The **requirements** are too complex to check and validate

You already knew some typical difficulties in Test Management, let's start with a practical example

Imagine now you are Test Manager of the project: **verify** and **evaluate** the quality of website <http://demo.guru99.com> before launching it to the customer.

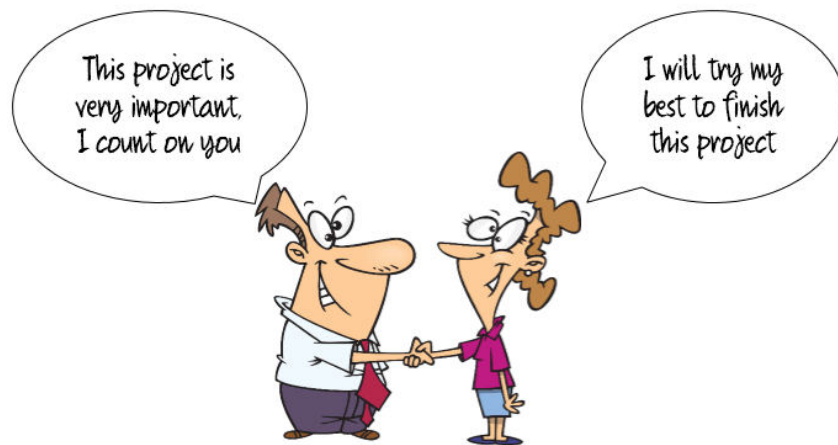
Your boss wants to discuss with you about the project planning, the test sufficiency, budget, and progress. Are you ready? Let's join in the discussion



The above example is just one of many difficulties you may face in your Task. The next tutorials will help you overcome these difficulties to your success.

Chapter 2: Test Management Process: A Complete Guide for Testing Project

You become a Test Manager of the most important project in your company. The project task is to test the net banking facility of the esteemed “Guru99 Bank”



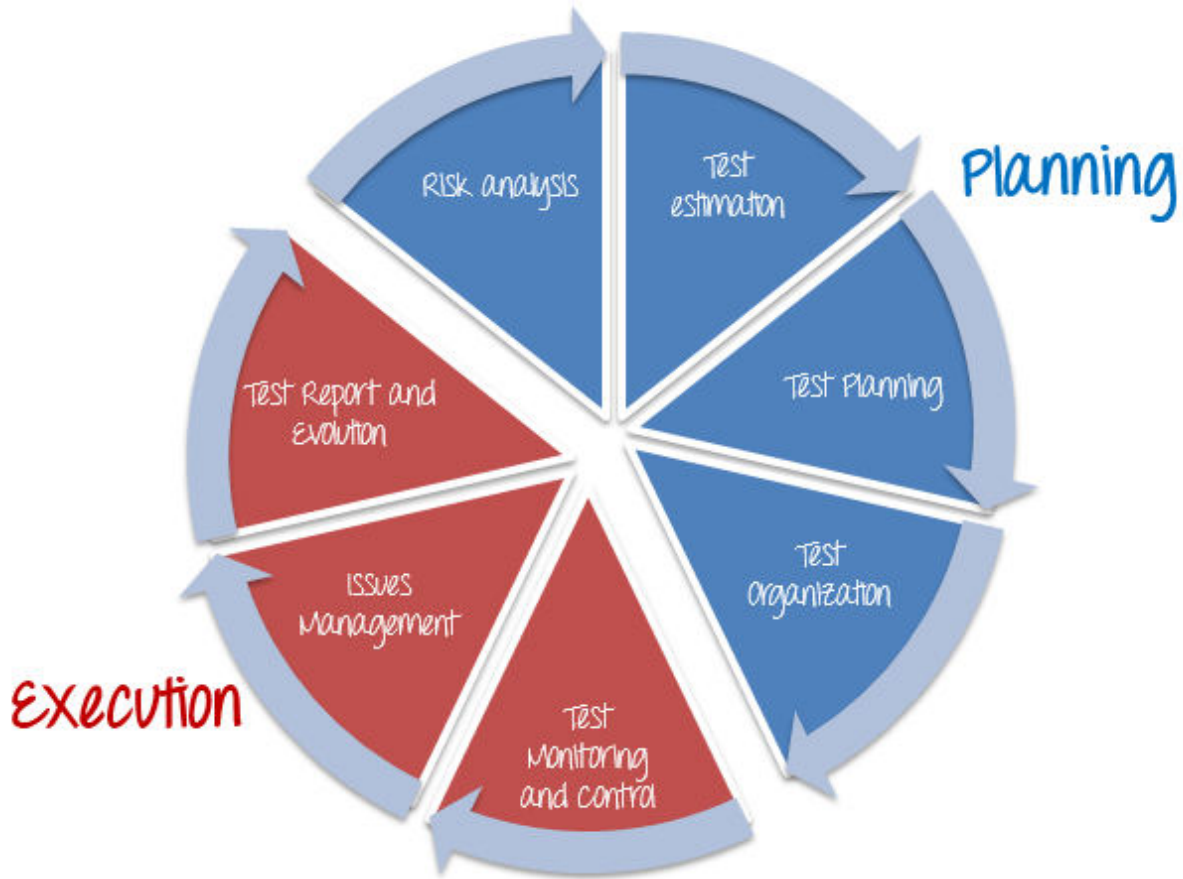
Everything seems to be great. Your boss trusts you. He counts on you. You have a good chance to prove yourself in your task. But the truth is:



Test Management is not just a single activity. It consists of a series of activities

Test Management Phases

This topic **briefly** introduces Test Management Process and shows you an **overview** of Test Management Phases. You will learn more details about each Test Management Phases in the next articles.



Test Management Process

There are two main Parts of Test Management Process: -

- Planning
 1. Risk Analysis
 2. Test Estimation
 3. Test Planning
 4. Test Organization
- Execution
 1. Test Monitoring and Control
 2. Issue Management
 3. Test Report and Evaluation

Planning

Risk Analysis and Solution



Risk is the potential loss (an undesirable outcome, however not necessarily so) resulting from a given action or an activity.

Risk Analysis is the first step which Test Manager should consider before starting any project. Because all projects may contain risks, early risk detection and identification of its solution will help Test Manager to **avoid** potential loss in the future & save on project cost.

You will learn more detail about the Risk Analysis and Solution in here.

Test Estimation



An estimate is a forecast or prediction. Test Estimation is approximately determining **how long** a task would take to complete. Estimating effort for the test is one of the **major** and **important** tasks in Test Management.

Benefits of correct estimation:

1. Accurate test estimates lead to better planning, execution and monitoring of tasks under a test manager's attention.
2. Allow for more accurate scheduling and help realize results more confidently.

You will learn more details about the Test Estimation and metrics in [here](#).

Test Planning



A Test Plan can be defined as a document describing the **scope**, **approach**, **resources**, and **schedule** of intended Testing activities.

A project may **fail** without a complete Test Plan. Test planning is particularly important in large software system development.

In software testing, a test plan gives **detailed** testing information regarding an upcoming testing effort, including:

- Test Strategy
- Test Objective
- Exit /Suspension Criteria
- Resource Planning
- Test Deliverables

You will learn more detail about the Test Planning in this article.

Test Organization



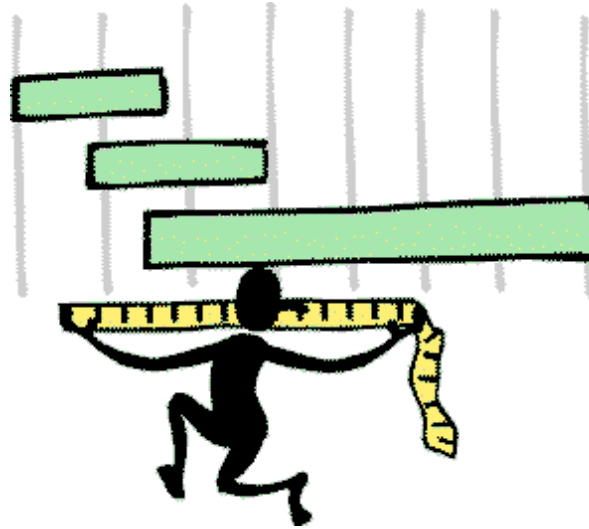
Now you have a Plan, but how will you stick to the plan and execute it? To answer that question, you have **Test Organization** phase.

Generally speaking, you need to organize an effective Testing Team. You have to assemble a skilled team to run the ever-growing testing engine effectively.

Do you need to know more about the Test Organization? Why are self-organized teams so important? [Click here](#) for detail.

Execution

Test Monitoring and Control



What will you do when your project runs **out of resource** or **exceeds** the time schedule? You need to Monitor and Control Test activities to bring it back on schedule.

Test Monitoring and Control is the process of overseeing all the metrics necessary to ensure that the project is running well, on schedule, and not out of budget.

Monitoring



Monitoring is a process of **collecting, recording, and reporting** information about the project activity that the project manager and stakeholder needs to know

To Monitor, Test Manager does following activities

- **Define** the project goal, or project performance standard
- **Observe** the project performance, and compare between the actual and the planned performance expectations
- **Record and report** any detected problem which happens to the project

Controlling

Project Controlling is a process of using data from monitoring activity to bring actual performance to planned performance.

In this step, the Test Manager takes action to correct the deviations from the plan. In some cases, the plan has to be **adjusted** according to project situation.

Issue Management



As mentioned in the beginning of the topics, all projects may have **potential** risk. When the risk happens, it becomes an **issue**.

In the life cycle of any project, there will be always an **unexpected** problems and questions that crop up. For an example:

- The company cuts down your project budget
- Your project team lacks the skills to complete project
- The project schedule is too tight for your team to finish the project at the deadline.

Risk to be avoided while testing:

- **Missing** the deadline
- **Exceed** the project budget
- **Lose** the customer trust

When these issues arise, you have to be ready to deal with them – or they can potentially affect the project's outcome.

How do you deal with the issues? What is the issue management?
Find the answer in the this article

Test Report & Evaluation

The project has already completed. It's now time for look back what you have done.



The purpose of the Test Evaluation Reports is:

"Test Evaluation Report" describes the results of the Testing in terms of Test coverage and exit criteria. The data used in Test Evaluation are based on the test results data and test result summary.

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