# **Chapter 2: Analysis for Online Examination System**

# Introduction:

After analyzing the basic requirement our main aim is to analyze or identify the problem and knowing its main context. The first thing is to understand the system requirement and the domain of developing new system. Both actions are correspondingly significant, but we focus on the first activity which leads to serve basic functional specification and finalize the successful design for proposed system. Our main task is to do feasibility study, software-hardware requirement, use-case (to identify the roles of actor), initial class diagram.

CATEWOE Analysis:

There are various kinds of investigation technique and the procedure that I will use for this task is Soft framework strategy (SSM). SSM concentrates more on individuals or clients than specialized amid examination. SSM comprise of various investigation strategies among them CATWOE is one of the examination procedures which helps in root definition. Root definition is a stage of SSM which terms the framework or procedure in a sorted-out manner, making it clears who perform what task, for what reason. CATWOE investigation is an apparatus to set up an exhaustive root definition model. CATWOE can be utilized for any venture and association however done when client needs ought to be considered for better quality and improve efficiency. Every one of the elements included inside or remotely in an association can be broke down utilizing this strategy. It energizes open talk of issues, discernments and necessities, joint critical thinking just as client interest and responsibility. (CATWOE Analysis, 2019)

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## CATWOE represents:

## • Customers/Clients: Clients are the recipient of the yields from the framework. For this framework they are posed inquiries about the issue with current framework and how they will feel or respond about proposed framework.

## • Actors/Agents: Agents/Actors are the client that attempt the exercises required with the framework, for example, representative for this framework who will utilize it. Following inquiries are posed for on-screen characters, for example, how they feel about proposed framework and what are the effect of new framework on them.

## • Transformation: Transformation alludes to the progressions that happens on information or procedures after the improvement of a framework. This progression is completed for this undertaking by posting the information sources and finding the idea of changes it will experience while delivering yield.

## • Worldview: For, this task the surroundings, for example, what is happening in and outside of the association that may impact the advancement of this framework is considered. This progression includes connecting with the procedure or framework under investigation in its more extensive setting to feature the results or importance of such procedure to the general framework.

## • Owners: The individual who claims an association is likewise engaged with an investigation amid this framework improvement. We must think about what job they will play in investigation and will they help in examination. Proprietor should be considered for the framework as they can stop the undertaking and choose whether to proceed with changes or not.

## • Environment: The investigation is to discover about the outer requirements under which this framework works, and which may hamper or limit the advancement or changes to the framework. Normally political, lawful, financial, social, mechanical factor etc. are considered for their effect on framework advancement.

## Feasibility Study:

It is used to measure the how the system is beneficial to any organization through this website. This is done by the research and investigation or general idea of online exam that can be implemented in the automated system. We also cover the impact on organization and ability to meet user requirement with effective use of resources. We also deal with different types of feasibility study which are listed below with descriptions.

* Economic feasibility:

It is commonly called cost benefit analysis which determine how system give benefits with candidate registration fees and compare with their costs. It is the most frequently used technique for assessing the usefulness and performance of the system. If the benefits balance the cost the further process is made for design and implementation. It reduces the cost used by manually in comparison with automated system. If the candidate registers with the OES they can give up to date activities. Thus, the system is economically feasible.

* Technical feasibility:

Technical feasibility alludes to the possibility or accessibility of the equipment and programming to finish the proposed task. For this task the innovation, for example, equipment assets, programming and other all product devices are accessible to finish it without obstacle. Along these lines, this task is innovatively practical to finish it.

* Economic Feasibility: Economic attainability is known as budgetary or cost assessment concentrates to discover whether the undertaking is financially doable or not. This venture is monetarily practical as the expense does not reach out from the assessed spending plan. The expense was evaluated for things, for example, power, web for research, equipment or programming parts e.t.c.
* Operational Feasibility: Operational possibility alludes to the investigation of proposed programming whether it will be completely operational after advancement or not. This task is operationally possible as the present manual framework will be a computerized easy to use framework. With the required preparing the clients will most likely work it effectively. Ease of use will be high as this framework has high operational attainability.
* Legal Feasibility: Legal possibility is about the product being created whether it is lawfully accessible to create or not. This task is lawfully attainable as there is nothing dishonest about it. The proposed framework is legitimate, and it isn't illegal or principles of our nation.
* Schedule Feasibility: It alludes to the errand that will be should have been finished on various calendar as proposed. This venture is possible as the undertaking for programming advancement are sub-separated into little errand and time and days is allocated for each assignment. Along these lines, finishing each assignment in their due date helps accomplishing plan practicality for this venture.

Requirement Analysis:

Functional Requirement:

Functional Requirements are the capacities and practices of the framework. It determines the things framework perform. Useful Requirements report are set up for the client and they ought to have the capacity to comprehend it with no specialized learning. Utilitarian Requirements indicates layouts of work processes performed by the framework, incorporate capacities performed by explicit screens and other association prerequisites it must meet. The useful prerequisites of this framework are as per the following:

Non-functional Requirement:

Non-Functional Requirements alludes to the circuitous supporting highlights of the framework. It covers the various prerequisites that is excluded in useful necessities. It portrays how the framework functions and determines how the framework ought to carry on. It is a requirement upon the frameworks conduct and known as quality properties of a framework. The non-practical prerequisites for this framework are as per the following:

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## **MoSCoW Prioritization**

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MoSCoW prioritization is commonly called MoSCoW analysis or method which is popular world-wide as a prioritization technique for handling the functional and non- functional requirement. After analysing the key requirement, we should identify the system user or stakeholder in this method. The main requirement or functionality should need to get aligned on main objective and prioritization factor .The abbreviation, MoSCoW stands for four different sorts:

**M**ust have: It includes all the function that directly represent the fixed need of the project. It determines the requirement that must be fulfilled for the closure solution that need to be satisfactory. For e.g., The student ‘must’ login their account to take exam.

**S**hould have: Should have enterprises are just under the must-haves. It is the high-need necessity that should be contained within if it is possible in certain milestone or time estimate. If the time within the project is left out, we should process this requirement as well which directly aid the value of project. For e.g. should update or remove the exam schedule.

**C**ould have: It is commonly called fine to have functions. It will not affect the core operation if we left out this and somehow influence on consequences but if we aid such condition it creates a significant to the system.

**W**on’t have: According to the user story the requirement may be irrelevant to this system. So, it should not be priority for current point of view. It just helps the system that may or may not be applicable for the system.

## Requirement Specification:

Software requirement:

* Operating system- Windows XP, 10 and other.
* Front End: Subline text or Notepad++
* Back end: MySQL
* Browser: Internet Explorer or Google Chrome
* Programming Language: PHP, HTML5, bootstrap, jQuery, CSS
* Local server: XAMPP

Hardware requirement:

* RAM: 2GB or higher
* Hard Drive-80 GB
* Processor:1 GHz or higher
* Screen resolution: 1024 \*768 resolution for better experience.

## Natural Language Analysis:

Proposed:

The main propose of online examination is to support educational institutions and other form to create exam form student or candidate in an automated manner. It also reduces the time consumption and paper works. The result is recorded in the database which makes easier to search the record of each candidate. The exam will be automated which helps the fact knowledge of any candidate.

Scope:

* OES can be used in both educational institution and overall corporate world.
* The system knobs all the functionality and generate test exam organize by the faculty and review the feedback and provide the test.
* OES is cost-effective and fabulous techniques to take exams.
* The administrator prepares the question for each exam within the system.
* The student can login the system to give exam by their enrollment code number facilitated by the college or university.
* The question pattern will be the multiple-choice question in a random way according to their courses.
* It is web-based application or website so, It can be applicable for anywhere or at any time.

## Use Case Diagram:

It is the behavioral diagram which is defined or created from the Use case analysis in the form of Unified Modeling Language (UML). The main aims of the analysis are to overview the functionality or role of actors within the system. It also shows up the dependencies between the use case and actors.

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## Initial Class Diagram:

Class Diagram is additionally the piece of investigation that characterizes the structure of a framework. It is referred to as auxiliary outline in UML as it demonstrates framework's classes, their characteristics, strategies and relationship among class. For, making class graphs there are different advances that is should be finished.

A close up of a map

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