

Online Examination System

**A Project Report Submitted
In Partial Fulfillment of the Requirements for
the Degree of**

MASTER OF COMPUTER APPLICATIONS

**by
Harshit TYAGI
(1900290149048)**

**Under the Supervision of
Dr. Ajay Kumar Shrivastava
KIET Group of Institutions, Ghaziabad**



**to the
FACULTY OF COMPUTER APPLICATIONS**

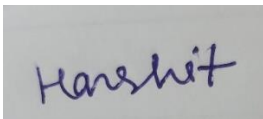
**DR. A.P.J ABDUL KALAM TECHNICAL UNIVERSITY,
Formerly Uttar Pradesh Technical University, LUCKNOW**

July, 2021

DECLARATION

I hereby declare that the work presented in this report entitled “Online Examination System”, was carried out by me. I have not submitted the matter embodied in this report for the award of any other degree or diploma of any other University or Institute. I have given due credit to the original authors/sources for all the words, ideas, diagrams, graphics, computer programs, experiments, results, that are not my original contribution. I have used quotation marks to identify verbatim sentences and given credit to the original authors/sources.

I affirm that no portion of my work is plagiarized, and the experiments and results reported in the report are not manipulated. In the event of a complaint of plagiarism and the manipulation of the experiments and results, I shall be fully responsible and answerable.



Name : Harshit Tyagi

Roll. No. 1900290149048

Branch : Master of Computer Applications

CERTIFICATE

Certified that **Harshit Tyagi (1900290149048)** has carried out the project work presented in this report entitled “**Online Examination System**” for the award of **Master of Computer Application** from Dr. A.P.J. Abdul Kalam Technical University, Lucknow under my supervision. The report embodies result of original work, and studies are carried out by the student himself and the contents of the report do not form the basis for the award of any other degree to the candidate or to anybody else from this or any other University.

INTERNAL EXAMINER

External Examiner

Dr. Ajay Kumar Shrivastava

Professor & Head

Dept. of Computer Applications

KIET Group of Institutions, Ghaziabad

ABSTRACT

Online examination system is a web-based examination system where examinations are given online, either through the internet or intranet using computer system.

The main goal of this online examination system is to effectively evaluate the student thoroughly through a totally automated system that not only reduce the required time but also obtain fast and accurate results.

The online objective exam system is an online test system that allows users to take online tests and automatically generates results based on answers marked by users. The system is to be used for various online tests conducted by school's colleges and other institutions.

The system is an online application that can be used to take tests online and get instant results. The system is designed currently for 8 subjects.

It also consists of an admin module. The admin module leads to admin dashboard which is accessible through admin login.

The admin dashboard allows admin to add new questions into system along with 4 options and 1 right answer. The admin may also set the time in minutes for every subject and number of questions.

So now whenever user registers he may then login using registered username password. The user is now allowed to give a test from any 8 subjects as desired.

On choosing a subject the test starts and user may now tick desired answers within the time limit. After the time ends the system goes to the result page and shows users score to him.

ACKNOWLEDGEMENTS

Success in life is never attained single handedly. My deepest gratitude goes to my Project supervisor, **Dr. Ajay Kumar Shrivastava, Professor and Head, Department of Computer Application** for his guidance, help and encouragement throughout my research work. Their enlightening ideas, comments, and suggestions. Words are not enough to express my gratitude for his insightful comments and administrative help at various occasions.

Fortunately, I have many understanding friends, who have helped me a lot on many critical conditions.

Finally, my sincere thanks go to my family members and all those who have directly and indirectly provided me moral support and other kind of help. Without their support, completion of this work would not have been possible in time. They keep my life filled with enjoyment and happiness.

Harshit Tyagi

1900290149048

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CHAPTER 1

INTRODUCTION

On-line examinations contents providers to focus on creating effective assessment questions and focusing on exam's feedback delivery to students. In the paper we present techniques that are pertinent to the elements of assessment process: answers submission, computerized grading, and feedback after submission.

As the modern organizations are automated and computers are working as per the instructions, it becomes essential for the coordination of human beings, commodity and computers in a modern organization.

The administrators, instructor, Students who are attending for online examination can communicate with the system through this projects, thus facilitating effective implementation and monitoring of various activities of Online Examinations like conducting Exams as per scheduled basis and delivering result to that particular use or student. And the details of students who attempted Online Examination are maintained at administrator.

This document will propose all features and procedures to develop the system. This document specially containing details about objectives, scope limitation, process model, primary requirements, team development, possible project risks, project schedule, and finally monitoring and reporting mechanisms.

On-line Exam System is very useful for Educational Institute to prepare an exam, save the time that will take to check the paper and prepare mark sheets. It will help the Institute to testing of students and develop their skills. But the disadvantages for this system, it takes a lot of times when you prepare the exam at the first time for usage. And we are needs number of computers with the same number of students.

Purpose:

- Responses by the candidates will be checked automatically and instant.
- Online examination will reduce the hectic job of assessing the answers given by the candidates.
- Being an integrated Online Examination System it will reduce paper work
- Can generate various reports almost instantly when and where required.

Scope:

This project would be very useful for educational institutes where regular evaluation of students' is required. Further it can also be useful for anyone who requires feedback based on objective type responses.

Definitions, Acronyms:

The sub-section provides the definitions of all terms, acronyms, and abbreviations used in this document to understand the SRS properly.

CHAPTER 2

LITERATURE REVIEW

2.1 What Is a Strategy?

There are different definitions of strategy. However, for the purpose of this study, we must select a definition. According to Tony Proctor, a strategy is a plan that integrates an organization's major goals, policies, decisions and sequences of action into a cohesive whole. It can be applied at all levels in an organization and pertain to any of the functional areas of management. Thus there may be production, financial, marketing, personnel and corporate strategies, just to name a few. In marketing, there may be pricing, product, promotion, distribution, marketing research, sales, advertising, merchandising, etc. strategies. Strategy is concerned with effectiveness rather than efficiency and is the process of analyzing the environment and designing the fit between the organization, its resources and objectives and the environment. [4]

Michael Porter states that strategy is about the means or ways (steps) of attaining goals and not their specification. He also indicates that strategy is one element in a four-part structure. According to Porter, those four part structures are: (a) what are the goals to be attained? (b) How will the resources be deployed? (c) The tactics;

i.e. the ways in which resources that have been deployed are actually used or employed and (d) are the resources (means) themselves available and at our disposal? Both strategy and tactics bridge the gap between goals and means. In business, as in the military, strategy bridges the gap between policy and tactics. It is the creation of a unique and valuable position, involving a different set of activities. Meaning strategy is about competitive position, about differentiating yourself in the eyes of the customer, about adding value through a mix of activities different from those used by competitors. [5]

Subhash C. Jain went further to highlight 5 reasons why an organization needs strategy. He stipulated that any organization needs strategy (a) when resources are finite, (b) when there is uncertainty about competitive strengths and behavior, (c) when commitment of resources is irreversible, (d) when decisions must be coordinated between far-flung places and over time, and (e) when there is uncertainty about control of the initiative. [6] As have been stated above, it can be seen that strategy is vital to the

success of the business. Without it, company's goals may not be realized as there may be loss of focus on how to achieve those goals.

Therefore, it helps to give focus to the often scattered energy of tactics, and bring power to goals and the larger business vision. [7]

2.1.1 The Hierarchies of Strategy

There are three major levels of strategy in most multi product/service organizations: corporate strategy, business strategy and functional strategy.

Corporate strategy:

Strategy at this level attempts to bring together all the business lines of a company and point them toward an overall goal. It is mainly concerned with defining the set of businesses that should form the company's overall profile. [6]

Business strategy:

At the business level, strategy focuses on defining the manner of competition in a given industry or product/market segment. It usually covers a plan for a single product or a group of related products. Today, most strategic action takes place at the business unit level, where sophisticated tools and techniques permit the analysis of a business; the forecasting of such variables as market growth, pricing, and the impact of government regulation; and the establishment of a plan that can sidestep threats in an erratic environment from competitors, economic cycles, and social, political, and consumer changes. [6]

Functional strategy:

Centers on how resources allocated to the various functional areas can be used most efficiently to support the business-level strategy. The primary focus of marketing strategy at this level is to allocate and coordinate marketing resources and activities to achieve the firm's objective within a specific product market [8]

Each functional area of a business (e.g. marketing) makes its own unique contributions to strategy formulation at different levels. In many firms, the marketing function represents the greatest degree of contact with the external environment, the environment least controllable by the firm. In such firms, marketing plays a pivotal role in strategy development. In its strategic role, marketing consists of establishing a match between the firm and its environment. It seeks solutions to problems of deciding (a) what business the firm is in and what kinds of business it may enter in the future and (b) how the chosen field(s) of endeavor may be successfully run in a competitive environment by pursuing product, price, promotion, and distribution perspectives to serve target markets. In the context of strategy formulation, marketing has two dimensions: present and future. The present dimension deals with the existing relationships of the firm to its environments. The

future dimensionencompasses intended future relationships (in the form of a set of objectives) and the action programs necessary to reach those objectives. [6]

2.1Marketing Strategy

According to Philip Kotler et al (1999) marketing strategy is the marketing logic bywhich the business unit hopes to achieve its marketing objectives. [9] It is an endeavor by a corporation (or any organization) to differentiate itself positively from its competitors, using its relative corporate strengths to better satisfy customer needs in a given environmental setting [6] For an organization, target consumers are at the center of the marketing strategy. The company identifies the total market it wants to serve and divides it into smaller segments. It then selects the most promising segments and focuses 12 on serving them. It designs a marketing mix using mechanisms under its control: product, price, place and promotion. It also engages in marketing analysis, planning, implementation and control in order to find the best marketing mix and to take action. The company uses these activities toenable it to watch and adapt to the marketing environment. [9]

Subhash went on to explain that within a given environment, marketing strategy deals essentially with the interplay of three forces known as the strategic three Cs which are: the customer, the competition, and the corporation. He noted that these three strategic Cs are dynamic, living creatures with their own objectives to pursueand together, form the marketing strategy triangle. If what the customer wants doesnot match the needs of the corporation, the latter's long-term viability may be at stake. Positive matching of the needs and objectives of customer and corporation isrequired for a lasting good relationship. But such matching is relative, and if the competition is able to offer a better match, the corporation will be at a disadvantageover time. In other words, the matching of needs between customer and corporationmust not only be positive, it must be better or stronger than the match between the customer and the competitor. When the corporation's approach to the customer is identical to that of the competition, the customer cannot differentiate between them.The result could be a price war that may satisfy the customer's but not the corporation's needs.

Furthermore, based on the interplay of the strategic three Cs, formation of marketing strategy requires the following three decisions:

1. Where to compete; that is, it requires a definition of the market (for example, competing across an entire market or in one or more segments).
2. How to compete; that is, it requires a means for competing (for example, introducing a new product to meet a customer's need or establishing a new positionfor an existing product).
3. When to compete; that is, it requires timing of market entry (for example, beingfirst in the market or waiting until primary demand is established). Thus, marketingstrategy is the creation of a unique and valuable position, involving a different set of activities. Thus,

development of marketing strategy requires choosing activities that are different from rivals. [6]

Types of marketing strategies Michael Porters Generic Strategies

According to Porter (1985), there are two basic types of competitive advantage a firm can possess: low cost or differentiation. The significance of any strength or weakness a firm possesses is ultimately a function of its impact on relative cost or differentiation. Cost advantage and the differentiation in turn are derived from industry structure. The two basic types of competitive advantage combined with the scope of activities for which a firm seeks to achieve them lead to three generic strategies for achieving above-average performance in an industry: cost leadership, differentiation, and focus. The focus strategy has two variants, cost focus and differentiation focus. [10]

Cost Leadership:

A company pursuing cost leadership strategy aims to become the low cost producer in its industry. The company has a broad scope; it can serve many industry segments and may even operate in related industries. The sources of cost advantage vary and depend on what the industry structure is. They may be the pursuit of economies of scale, proprietary technology, preferential access to raw materials etc. For example, in the facility service industry, a company providing the service of security guard could achieve cost advantage by maintaining low overhead, an abundant source of low cost of labor and provide efficient training procedures due to high turnover. If a firm can achieve and sustain overall cost leadership, then it will be an above average performer in its industry provided it can command price at or near the industry average. If a firm which is a cost leader offers equivalent or lower prices than its rivals, then its low cost position will yield high returns. However, despite being a cost leader and relies on cost leadership for its competitive advantage a firm cannot ignore the bases of differentiation because if its product is not perceived as comparable or acceptable by buyers, a cost leader will be forced to lower prices well

below its competitors' in order for it to gain sales. This may nullify the benefits of its favorable cost position. Also, the cost leader must achieve parity or proximity in the bases of differentiation relative to its competitors. Parity in the bases of differentiation allows a cost leader to translate its cost advantage directly into higher profits than competitors. Proximity in differentiation implies that the price discount necessary to achieve an acceptable market share does not offset a cost leader's advantage which enables the cost leader to earn above average returns. The strategic logic of cost leadership usually requires that a firm be the cost leader and not one of several firms trying to be in that position. Many firms have made serious errors by failing to recognize this. When there is more than one aspiring cost leader, rivalry among them is usually fierce because every point of market share is viewed as crucial. Unless one firm can gain cost leader and "persuade" others to abandon their strategies, the consequences for profitability (and long run industry structure) can be disastrous. Thus cost leadership is a strategy particularly

dependent on preemption, unless major technical change allows a firm to radically change its cost position. [10]

Differentiation: The second generic strategy according to Porter (1998) is differentiation. In a differentiation strategy, a firm strives to be unique in its industry along some dimensions that are widely valued by buyers. It selects one or more attribute that many buyers in an industry perceive as important and uniquely position itself to meet that need. It is rewarded for its uniqueness with a premium price. The means for differentiation is peculiar to each industry. Differentiation can be based on the product itself, the delivery system by which it is sold, the marketing approach, and a broad range of other factors. A firm that can achieve and sustain differentiation will be an above average performer in its industry if its premium price exceeds the cost it incurred to be unique. A differentiator therefore must always seek ways of differentiating that lead to a price premium greater than the cost of differentiating. A differentiator cannot ignore its cost position because its price premium will be nullified by a markedly inferior position. A differentiator thus aims at cost parity or proximity relative to its competitors, by reducing cost in all areas that do not affect differentiation.

The logic of the differentiation strategy requires that a firm choose attributes in which to differentiate itself that are different from its rivals. A firm must truly be unique in something or be perceived as unique if it is to expect a premium price. In contrast to cost leadership however, there can be more than one successful differentiation strategy in an industry if there are a number of attributes that are valued by customers. [10]

Focus: The third generic strategy is focus. This strategy is quite different from the others because a firm chooses a narrow competitive segment in the industry and fits its strategy to serving them to the exclusion of others. By optimizing its strategy for the target segment, the focuser seeks to achieve a competitive advantage in its target segments even though it does not possess an overall competitive advantage. The focus strategy has two variants; the cost focus and differentiation focus. In cost focus a firm endeavors to achieve cost advantage in its target segment while in differentiation focus, it seeks differentiation in its target segment. Both variants of the focus strategy rest on differences between a focuser's target segment and other segments in the industry. The target segment must either have buyers with unusual needs or the production and delivery system that best serve the target market must be different from that of other industry segments. Cost focus exploits differences in cost behavior in some segment, while differentiation focus exploits the special needs of buyers in certain segments. Such differences imply that the segments are poorly served by broadly targeted competitors who serve them at the same time as they serve others. The focuser can thus achieve competitive advantage by dedicating itself to the segment exclusively. Breadth of target is clearly a matter of degree, but the essence of focus is the exploitation of a narrow target difference from the balance of the industry. Narrow focus in and of itself is not sufficient for above average performance. [10] A focuser takes advantage of sub optimization in either direction by broadly targeted competitors. Competitors may be underperforming in meeting the needs of a particular segment, which brings the opportunity for differentiation focus. Also, broadly targeted

competitors may be over performing in meeting the needs of a segment which means that they are bearing higher than necessary cost in serving it. An opportunity for cost focus may be present in just meeting the needs of such a segment and no more. However, before the focus strategy can succeed, a focuser's target segment must be different from the competitors and be structurally attractive. This difference and attractiveness enables the focuser to become an above-average performer in its industry. The importance of segment structural attractiveness cannot be over emphasized because some segments in an industry are much less profitable than others. Nevertheless, there is often room for several sustainable focus strategies in an industry, as long as focusers choose different target segments. Most industries have a variety of segments, and each one that involves a different buyer need or different optimal production or delivery system is a candidate for a focus strategy. [10] Stuck in the middle: A firm that carries out each generic strategy but does not achieve any of them can be said to be "Stuck in the middle". It has no competitive advantage. This strategic position is usually a recipe for below average performance. A firm that is stuck in the middle will compete at a disadvantage because the cost leader, differentiators, or focuser will be better positioned to compete in any segment. If a firm that it stuck in the middle is lucky enough to discover a profitable product or buyer, competitors with a sustainable competitive advantage will quickly eliminate the spoil. In most industries, quite a few competitors are stuck in the middle. A firm that is stuck in the middle will earn attractive profits only if the structure of its industry is highly favorable, or if the firm is fortunate enough to have competitors that are also stuck in the middle. Usually, however, such a firm will be much less profitable than rivals achieving one of the generic strategies. Industry maturity tends to widen the performance differences between firms with a generic strategy and those that are stuck in the middle because it exposes ill-conceived strategies that have been carried along by rapid growth. [10]

Competitive Advantage Lower Cost Differentiation Figure 3.2 Three Generic Strategies

	1. Cost Leadership	2. Differentiation	3. A Cost focus
Target	Narrow	Broad	Broad
Competitive Scope	Narrow	Broad	Broad

Table 3.1 Risk of the generic strategies [9]

RISKS OF COST LEADERSHIP RISKS OF DIFFERENTIATION RISKS OF FOCUS

Cost leadership is not Sustained • competitors imitate • technology changes • other bases for cost Leadership erode Proximity in differentiation is lost Cost focuser achieve even lower cost in segment Cost leadership is not Sustained • Competitors imitate • bases for differentiation become less important to buyers Cost proximity is lost Differentiation focuser achieve even greater differentiation in segments The focus strategy is imitated The target segment becomes structurally unattractive • structure erodes • demand disappears Broadly targeted competitors overwhelm the segment • the segment's differences from other segments narrows • the advantages of a broad line increase New focuser sub-segment.

CHAPTER 3

FEASABILITY STUDY

Once scope has been identified (with the concurrence of the customer), it is reasonable to ask: “Can we build software to meet this scope? Is the project feasible?” All too often, software engineers rush past this questions (or are pushed past them by impatient managers or customers), only to become mired in a project that is doomed from the onset.

When we are developing the system (software), we must know the proposed system will be feasible or i.e. practically implemented or not it may possible the proposed (candidate) system may not implemented due to many reasons like it may take long time in development than the specified time limit, cost may increase than proposed one etc. Therefore, we must analyze the feasibility of the system.

Feasibility is the analysis of risks, costs & benefits relating to economics, technology & user operation.

There are several types of feasibility depending on the aspect they cover. Some important feasibilities are as follows: -

- Technical Feasibility
- Operational Feasibility III) Economical Feasibility

OPERATIONAL FEASIBILITY: -

Operational Feasibility is a measure of how people are able to work with system. This type of feasibility demands if the system will work when developed and installed. Since website is very user friendly so users will find it comfortable to work on this site.

ECONOMICAL FEASIBILITY

Economic analysis is the most frequently used evaluating the effectiveness of proposed system, more commonly known as Benefit analysis. The Benefit analysis is to determine benefits and savings which are expected from candidate system and compare them with cost. If the benefits are more than the cost, then decision is made to design and implement the system. The cost and benefits may be direct or indirect and tangible or intangible.

CHAPTER 4

DESIGN ANALYSIS

Design is the first step in the development phase for any techniques and principles for the purpose of defining a device, a process or system in sufficient detail to permit its physical realization.

Once the software requirements have been analyzed and specified the software design involves three technical activities - design, coding, implementation and testing that are required to build and verify the software.

The design activities are of main importance in this phase, because in this activity, decisions ultimately affecting the success of the software implementation and its ease of maintenance are made. These decisions have the final bearing upon reliability and maintainability of the system. Design is the only way to accurately translate the customer's requirements into finished software or a system.

Design is the place where quality is fostered in development. Software design is a process through which requirements are translated into a representation of software. Software design is conducted in two steps. Preliminary design is concerned with the transformation of requirements into data.

UML Diagrams:

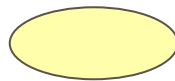
Actor:

A coherent set of roles that users of use cases play when interacting with the use cases.



Use case:

A description of sequence of actions, including variants, that a system performs that yields an observable result of value of an actor.



UML stands for Unified Modeling Language. UML is a language for specifying, visualizing and documenting the system. This is the step while developing any product after analysis. The goal from this is to produce a model of the entities involved in the project which later need to be built. The representation of the entities that are to be used in the product being developed need to be designed.

There are various kinds of methods in software design:

They are as follows:

- Use case Diagram
- Sequence Diagram
- Collaboration Diagram

- Activity Diagram
- State chat Diagram

USECASE DIAGRAMS:

Use case diagrams model behavior within a system and helps the developers understand of what the user requires. The stick man represents what's called an actor.

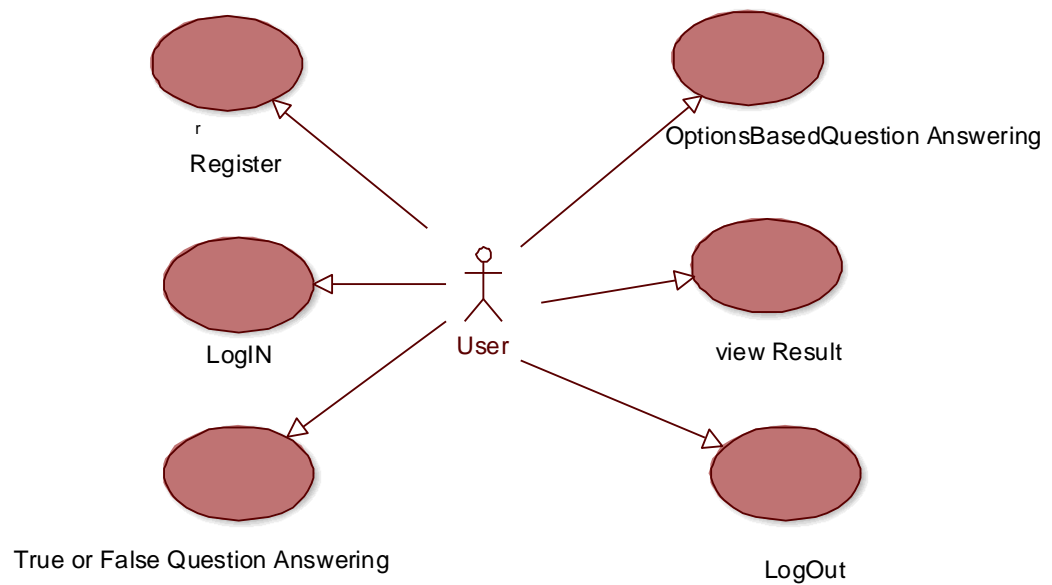
Use case diagram can be useful for getting an overall view of the system and clarifying who can do and more importantly what they can't do.

Use case diagram consists of use cases and actors and shows the interaction between the use case and actors.

- The purpose is to show the interactions between the use case and actor.
- To represent the system requirements from user's perspective.
- An actor could be the end-user of the system or an external system.

USECASE DIAGRAM:

A Use case is a description of set of sequence of actions. Graphically it is rendered as an ellipse with solid line including only its name. Use case diagram is a behavioral diagram that shows a set of use cases and actors and their relationship. It is an association between the use cases and actors. An actor represents a real-world object. Primary Actor – Sender, Secondary Actor Receiver.

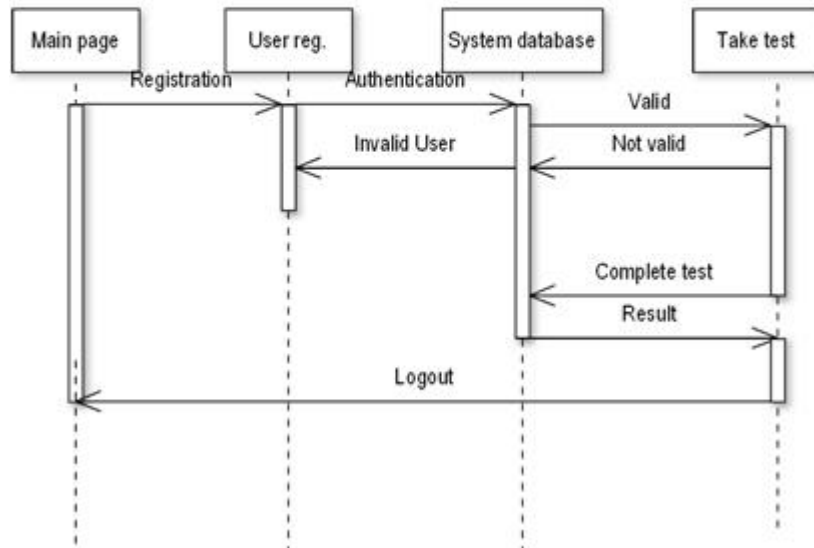


SEQUENCE DIAGRAM:

Sequence diagram and collaboration diagram are called **INTERACTION DIAGRAMS**. An interaction diagram shows an interaction, consisting of set of objects and their relationship including the messages that may be dispatched among them.

A sequence diagram is an introduction that empathizes the time ordering of messages. Graphically a sequence diagram is a table that shows objects arranged along the X-axis and messages ordered in increasing time along the Y-axis

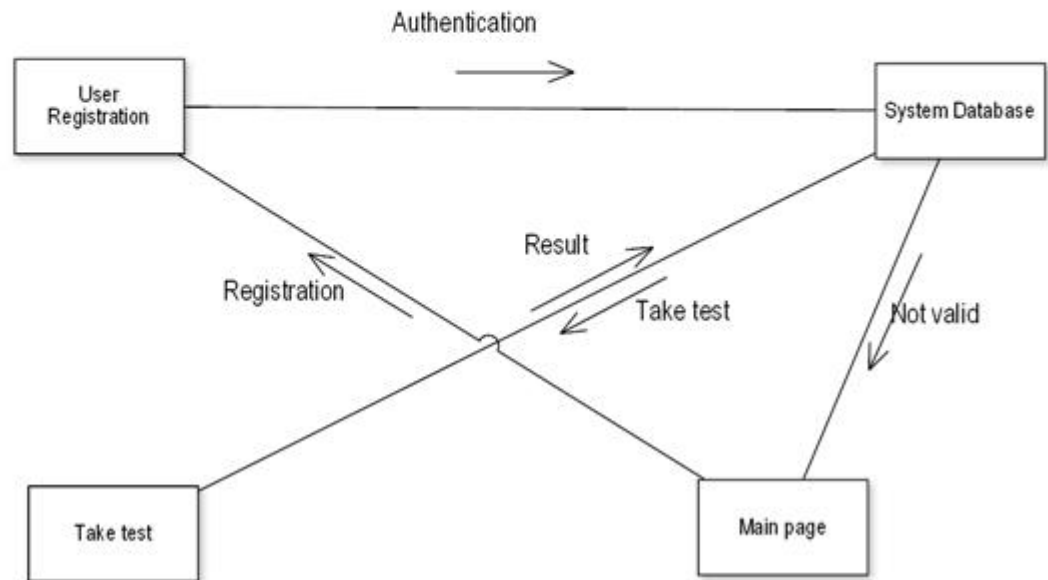
Sequence Diagram



COLLABORATION DIAGRAM:

A collaboration diagram is an introduction diagram that emphasizes the structural organization of the objects that send and receive messages. Graphically a collaboration diagram is a collection of vertices and arcs.

Collaboration Diagram



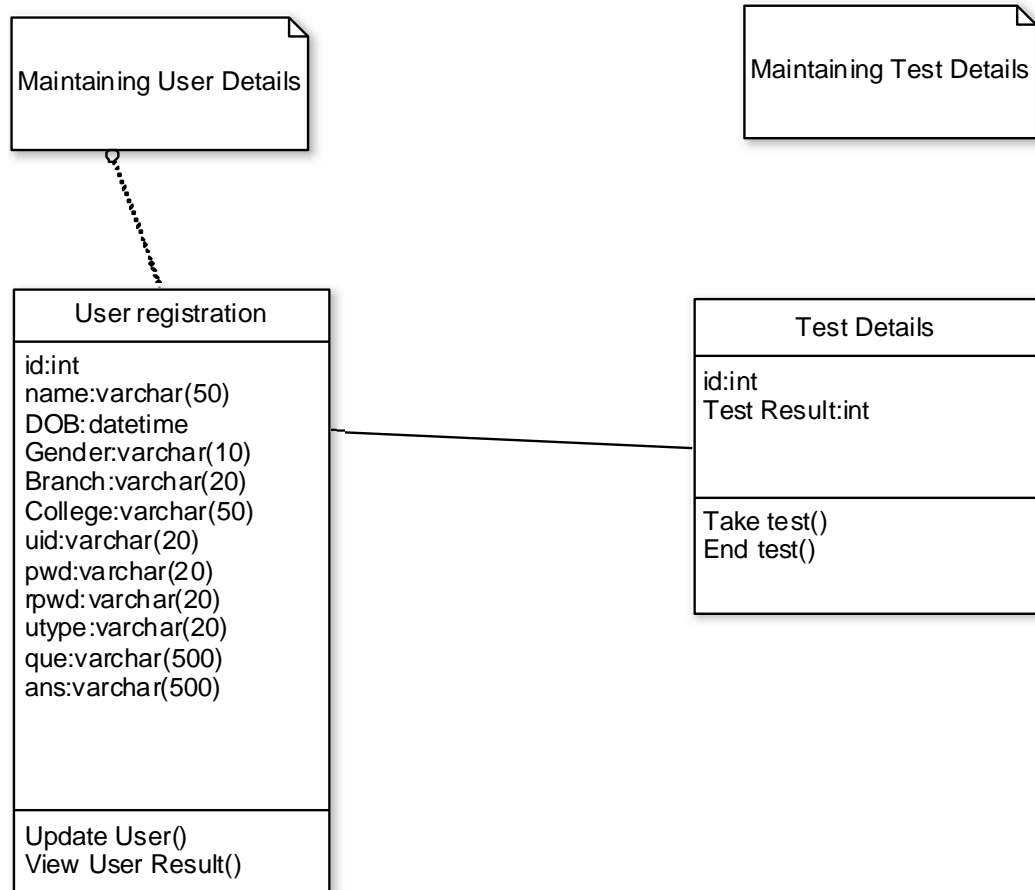
CLASS DIAGRAM:

Class is nothing but a structure that contains both variables and methods. The Class Diagram shows a set of classes, interfaces, and collaborations and their relationships. There is most common diagram in modeling the object oriented systems and are used to give the static view of a system. It shows the dependency between the classes that can be used in our system.

The interactions between the modules or classes of our projects are shown below. Each block contains Class Name, Variables and Methods.

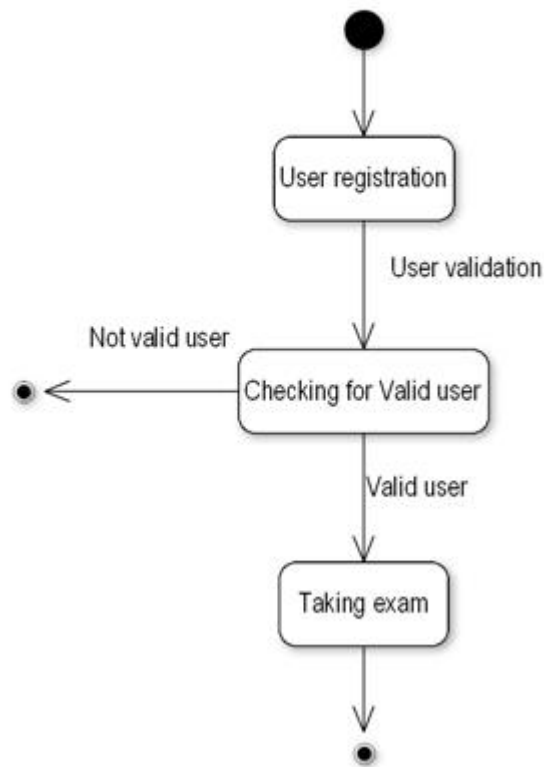
CLASS:

A description of set of objects that share the same attributes, operations, relationships, and semantics



State Chart Diagram

Statechart Diagram



DATA FLOW DIAGRAMS:

The DFD takes an input-process-output view of a system i.e. data objects flow into the software, are transformed by processing elements, and resultant data objects flow out of the software

Data objects represented by labeled arrows and transformation are represented by circles also called as bubbles. DFD is presented in a hierarchical fashion i.e. the first data flow model represents the system as a whole. Subsequent DFD refine the context diagram (level 0 DFD), providing increasing details with each subsequent level.

The DFD enables the software engineer to develop models of the information domain & functional domain at the same time. As the DFD is refined into greater levels of details, the analyst performs an implicit functional decomposition of the system. At the same time, the DFD refinement results in a corresponding refinement of the data as it moves through the process that embody the applications.

A context-level DFD for the system the primary external entities produce information for use by the system and consume information generated by the system. The labeled arrow represents data objects or object hierarchy.

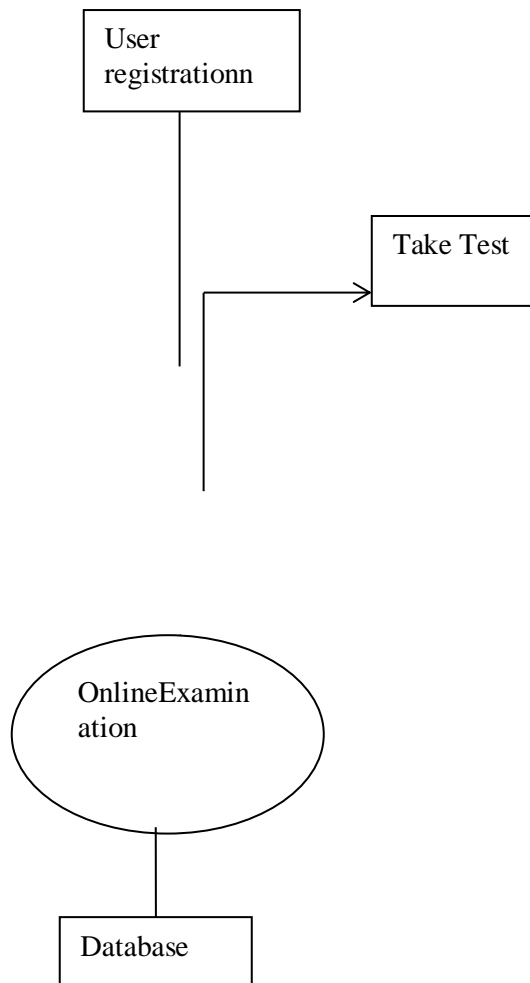
RULES FOR DFD:

- Fix the scope of the system by means of context diagrams.
- Organize the DFD so that the main sequence of the actions
- Reads left to right and top to bottom.
- Identify all inputs and outputs.
- Identify and label each process internal to the system with Rounded circles.
- A process is required for all the data transformation and Transfers. Therefore, never connect a data store to a data Source or the destinations or another data store with just a Data flow arrow.
- Do not indicate hardware and ignore control information.

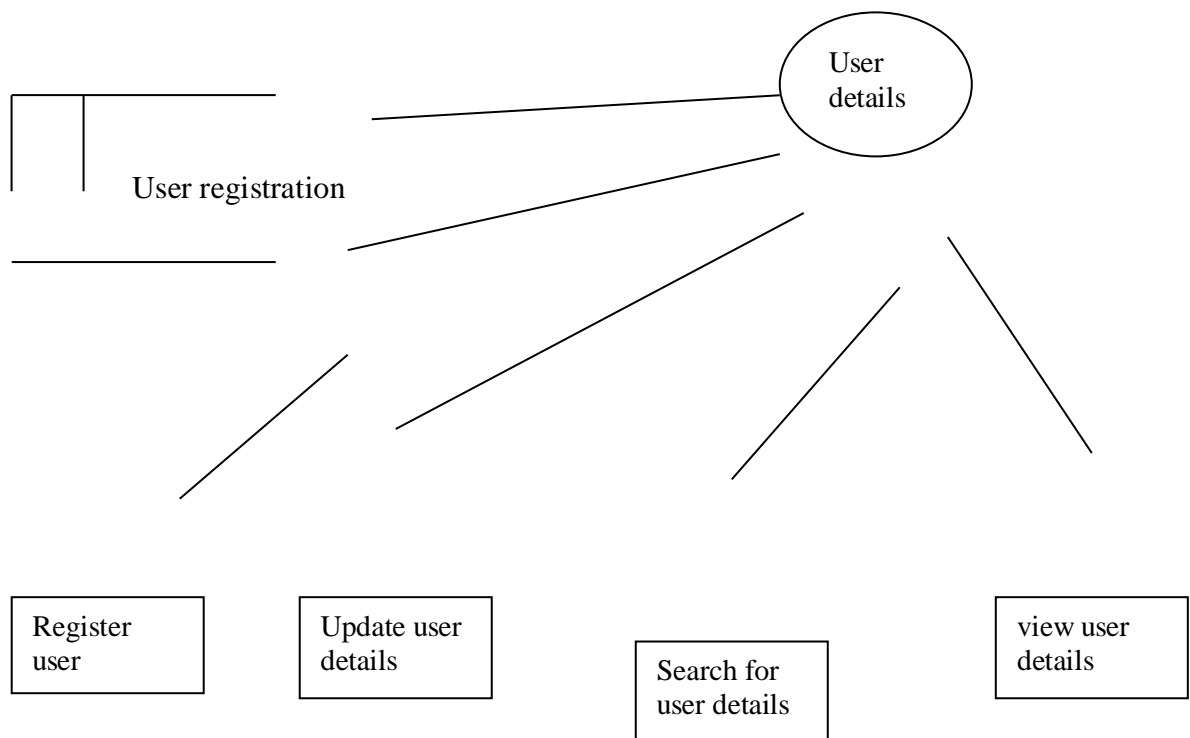
- Make sure the names of the processes accurately convey everything the process is done.
- There must not be unnamed process.
- Indicate external sources and destinations of the data, with Squares.
- Number each occurrence of repeated external entities.
- Identify all data flows for each process step, except simple Record retrievals.
- Label data flow on each arrow.
- Use details flow on each arrow.
- Use the details flow arrow to indicate data movements.

DATAFLOW DIAGRAMS:

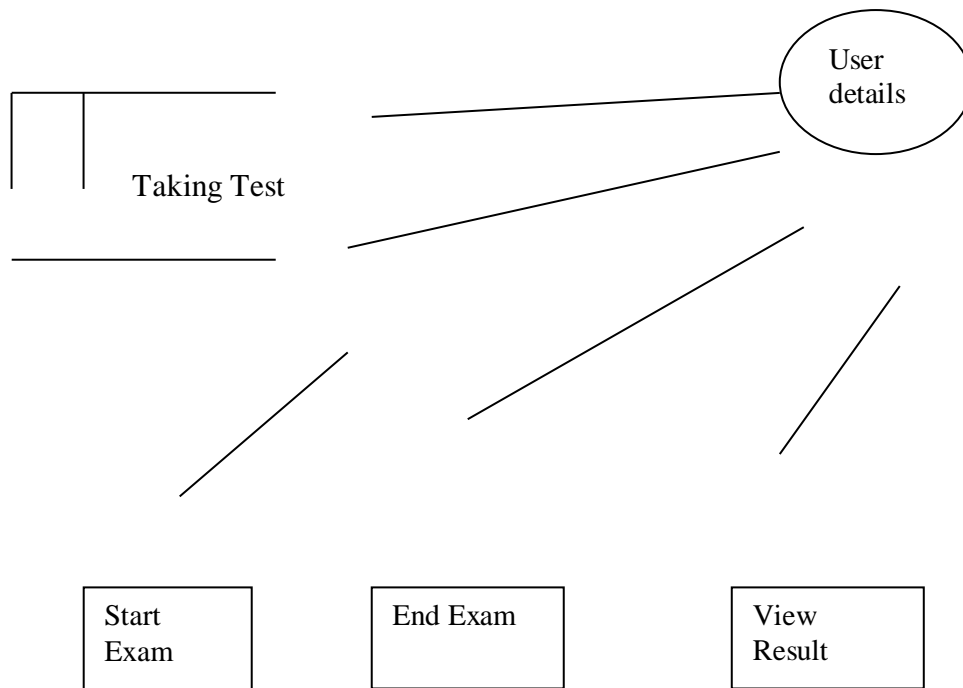
Database:



User registration



Taking Test



E-R Diagrams:

The Entity-Relationship (ER) model was originally proposed by Peter in 1976 [Chen76] as a way to unify the network and relational database views. Simply stated the ER model is a conceptual data model that views the real world as entities and relationships. A basic component of the model is the Entity-Relationship diagram which is used to visually represents data objects. Since Chen wrote his paper the model has been

extended and today it is commonly used for database design for the database designer, the utility of the ER model is:

- it maps well to the relational model. The constructs used in the ER model can easily be transformed into relational tables.
- it is simple and easy to understand with a minimum of training. Therefore, the model can be used by the database designer to communicate the design to the end user.
- In addition, the model can be used as a design plan by the database developer to implement a data model in a specific database management software.

Connectivity and Cardinality

The basic types of connectivity for relations are: one-to-one, one-to-many, and many-to-many. A one-to-one (1:1) relationship is when at most one instance of an entity A is associated with one instance of entity B. For example, "employees in the company are each assigned their own office. For each employee there exists a unique office and for each office there exists a unique employee.

A one-to-many (1: N) relationship is when for one instance of entity A, there are zero, one, or many instances of entity B, but for one instance of entity B, there is only one instance of entity A. An example of a 1: N relationship is

a department has many employees

each employee is assigned to one department

A many-to-many (M: N) relationship, sometimes called non-specific, is when for one instance of entity A, there are zero, one, or many instances of entity B and for one instance of entity B there are zero, one, or many instances of entity A. The connectivity of a relationship describes the mapping of associated

ER Notation

There is no standard for representing data objects in ER diagrams. Each modeling methodology uses its own notation. The original notation used by Chen is widely used in academic's texts and journals but rarely seen in either CASE tools or publications by non-academics. Today, there are a number of notations used, among the more common are Bachman, crow's foot, and IDEFIX.

All notational styles represent entities as rectangular boxes and relationships as lines connecting boxes. Each style uses a special set of symbols to represent the cardinality of a connection. The notation used in this document is from Martin. The symbols used for the basic ER constructs are:

- entities are represented by labeled rectangles. The label is the name of the entity. Entity names should be singular nouns.
- relationships are represented by a solid line connecting two entities. The name of the relationship is written above the line. Relationship names should be verbs
- attributes, when included, are listed inside the entity rectangle. Attributes which are identifiers are underlined. Attribute names should be singular nouns.
- cardinality of many is represented by a line ending in a crow's foot. If the crow's foot is omitted, the cardinality is one.
- existence is represented by placing a circle or a perpendicular bar on the line.
Mandatory existence is shown by the bar (looks like a 1) next to the entity for an instance is required. Optional existence is shown by placing a circle next to the entity that is optional

PROJECT MODULES:

ONLINE EXAMINATION SYSTEM MODULES:

1. **ADMIN MODULE:**

1.: REGISTER

2.LOGIN

3.CHANGE PASSWORD&FORGOTPASSWORD

4.STUDENT -MODIFING DETAILS

5.DEPARTMENTS-ENTERING/MODIFYING DETAILS

6.INSTRUCTOR DETAILS-MODIFYING DETAILS

- REGISTER: To be authenticated first have to be registered.
- LOGIN: The Registered User Can Be Allowed to view inner details for which he
Permitted
- CHANGE PASSWORD & FORGOT PASSWORD: User has rights to modify his
login details & also be informed through mails if he is unable to login.
- STUDENT -MODIFING DETAILS: User can be modified to change status of
each User.
- DEPARTMENTS-ENTERING/MODIFYING DETAILS: New departments adding
and old department deletions are spending by this user.
- INSTRUCTOR DETAILS-MODIFYING DETAILS: According to staff he can add or
delete Instructors for specific platforms.

2. INSTRUCTOR MODULE:

1.REGISTER

2.LOGIN

3.CHANGE PASSWORD & FORGOT PASSWORD

4.ADD QUESTIONS-DEPARTMENTS VERIFING.

5.UPDATE QUESTIONS -DEPARTMENTS VERIFING

6.CREATE EXAMS

7.UPDATE EXAMS

8.VIEW EXAM DETAILS- VIEW NO OF REGISTERED STUDENTS

VIEW NO OF ATTENDED STUDENTS

9.EVALUATE QUESTION: MULTIPLE CHOICE

TUE/FALSE

1.REGISTER: To be authenticated first have to be registered.

2.LOGIN: The Registered User Can Be Allowed to view inner details for which he
Permitted

3.CHANGE PASSWORD & FORGOT PASSWORD: User has rights to modify his
logging details& also be informed through mails if he is unable to login

4.ADD QUESTIONS-DEPARTMENTS VERIFING: According to flow of questions &
Technology he can add questions into the database.

5.UPDATE QUESTIONS -DEPARTMENTS VERIFYING: If any corrections in data of questions he can modify them

6.CREATE EXAMS: He will be prepared schedule for exams periodically.

7.UPDATE EXAMS: He has rights to modify exam schedule.

8.VIEW EXAM DETAILS- VIEW NO OF REGISTERED STUDENTS, VIEW NO. OF

ATTENDED STUDENTS: Can view at attended students who has registered.

9.EVALUATE QUESTION: MULTIPLE CHOICE TRUE/FALSE: Evaluation of marks based on his initiations when adding questions.

3. STUDENT MODULE:

1.REGISTER

2.LOGIN

3.TAKE EXAM- MULTIPLE CHOICE TRUE/FALSE

4. SEE EXAM RESULTS

5.LOGOUT

1.REGISTER: To be authenticated first have to be registered

2.LOGIN: The Registered User Can be allowed to view inner details for which he Permitted

3.TAKE EXAM- MULTIPLE CHOICE, TRUE/FALSE: The registered student allowed to start the

Exam.

4. SEE EXAM RESULTS: After Completion of exam he can view at his result.

5.LOGOUT: After the process of examination he turned to Logout page.

OVERVIEW OF TECHNOLOGIES USED

PHP

PHP is a server-side scripting language designed for web development but also used as a general-purpose programming language.

PHP is now installed on more than 244 million websites and 2.1 million web servers. Originally created by Ramus Leadoff in 1995, the reference implementation of PHP is now produced by The PHP Group. While PHP originally stood for Personal Home Page, it now stands for PHP: Hypertext Preprocessor, a recursive back.

PHP code is interpreted by a web server with a PHP processor module, which generates the resulting web page: PHP commands can be embedded directly into an HTML source document rather than calling an external file to process data.

It has also evolved to include a command-line interface capability and can be used in standalone graphical applications. PHP is free software released under the PHP License. PHP can be deployed on most web servers and also as a standalone shell on almost every operating system and platform, free of charge.

Common uses of PHP

- ☐ PHP performs system functions, i.e. from files on a system it can create, open, read,

write, and close them.

- ☐ PHP can handle forms, i.e. gather data from files, save data to a file, through email you can send data, return data to the user.
- ☐ You add, delete, modify elements within your database through PHP.
- ☐ Access cookies variables and set cookies.
- ☐ Using PHP, you can restrict users to access some pages of your website.
- ☐ It can encrypt data.

Characteristics of PHP

Five important characteristics make PHP's practical nature possible –

- ☐ Simplicity
- ☐ Efficiency
- ☐ Security
- ☐ Flexibility
- ☐ Familiarity
- ☐ BACK END- The back end is designed using MySQL which is used to design the databases
- ☐ MYSQL
- ☐ MySQL ("My S-Q-L", officially, but also called "My Sequel") is (as of July 2013) the world's second most widely used open-source relational database management system (RDBMS). It is named after co-founder Michael Widenersdaughter, my.
- ☐ The SQL phrase stands for Structured Query Language.

- ❑ The MySQL development project has made its source code available under the terms of the GNU General Public License, as well as under a variety of proprietary agreements.
- ❑ MySQL was owned and sponsored by a single for-profit firm, the Swedish company MySQL AB, now owned by Oracle Corporation.
- ❑ MySQL is a popular choice of database for use in web applications, and is a central component of the widely used LAMP open source web application software stack (and other 'AMP' stacks).
- ❑ LAMP is an acronym for "Linux, Apache, MySQL, and Perl/PHP/Python." Free- software- open source projects that require a full-featured database managementsystem often use MySQL.

HTML

HTML or Hyper Text Markup Language is the main markup language for creating web pages and other information that can be displayed in a web browser.

HTML is written in the form of HTML elements consisting of tags enclosed in angle brackets (like <html>), within the web page content.

HTML tags most commonly come in pairs like <h1> and </h1>, although some tags represent empty elements and so are unpaired, for example . The first tag in a pair is the start tag, and the second tag is the end tag (they are also called opening tags and closing tags). In between these tags web designers can add text, further tags, comments and other types of text-based content.

The purpose of a web browser is to read HTML documents and compose them into visible or audible web pages. The browser does not display the HTML tags, but uses the tags to interpret the content of the page.

HTML elements form the building blocks of all websites. HTML allows images and objects to be embedded and can be used to create interactive forms. It provides a means to create structured documents by denoting structural semantics for text such as headings, paragraphs, lists, links, quotes and other items.

It can embed scripts written in languages such as JavaScript which affect the behavior of HTML web pages.

CHARACTERISTICS:

Every browser supports HTML language.

- Easy to learn and use.
- It is by default in every window so you don't need to purchase extra software.
- You can integrate HTML with CSS, JavaScript, php etc.

CSS (Cascading Style Sheets) -

CSS Cascading Style Sheets (CSS) is a style sheet language used for describing the look and formatting of a document written in a markup language. While most often used to style web pages and interfaces written in HTML and XHTML, the language can be applied to any kind of XML document, including plain XML, SVG and XUL. CSS is a cornerstone specification of the web and almost all web pages' use CSS style sheets to describe their presentation. CSS is designed primarily to enable the separation of document content from document presentation, including elements such as the layout, colors, and fonts.

This separation can improve content accessibility, provide more flexibility and control in the specification of presentation characteristics, enable multiple pages to share formatting, and reduce complexity and repetition in the structural content (such as by allowing for tableless web design).

CSS can also allow the same markup page to be presented in different styles for different rendering methods, such as on-screen, in print, by voice (when read out by a speech-based browser or screen reader) and on Braille-based, tactile devices. It can also be used to allow the web page to display differently depending on the screen size or device on which it is being viewed. While the author of a document typically links that document to a CSS file, readers can use a different style sheet, perhaps one on their own computer, to override the one the author has specified.

However, if the author or the reader did not link the document to a specific style sheet the default style of the browser will be applied. CSS specifies a priority scheme to determine which style rules apply if more than one rule matches against a particular element. In this so-called cascade, priorities or weights are calculated and assigned to rules, so that the results are predictable.

- Create Stunning Web site - CSS handles the look and feel part of a web page. Using CSS, you can control the color of the text, the style of fonts, the spacing between paragraphs, how columns are sized and laid out, what background images or colors are used, layout designs, variation in display for different devices and screen sizes as well as a variety of other effects.
- Become a web designer - If you want to start a career as a professional web designer, HTML and CSS designing is a must skill.
- Control web - CSS is easy to learn and understand but it provides powerful control over the presentation of an HTML document. Most commonly, CSS is combined with the markup languages HTML or XHTML.
- Learn other languages - Once you understand the basic of HTML and CSS then other related technologies like JavaScript, php, or angular are become easier to understand.
- Adaptive to Diverse Users- Modern CSS-based Web pages have to accommodate the diverse range of browsers, devices, screen resolutions, font sizes, assistive technologies and other factors that users bring to.
- Modular- Modern websites are no longer collections of static pages. Pieces of content and design components are reused throughout a website and even shared between websites, as content management systems

JAVASCRIPT

JAVASCRIPT JavaScript (JS) is a dynamic computer programming language. It is most commonly used as part of web browsers, whose implementations allow client-side scripts to interact with the user, control the browser, communicate asynchronously, and alter the document content that is displayed. It is also being used in server-side programming, game development and the creation of desktop and mobile applications.

JavaScript is a prototype-based scripting language with dynamic typing and has first-class functions.

Its syntax was influenced by C. JavaScript copies many names and naming conventions from Java, but the two languages are otherwise unrelated and have very different semantics.

The key design principles within JavaScript are taken from them and Scheme programming languages.

It is a multi-paradigm language, supporting object-oriented, imperative, and functional programming styles. The application of JavaScript to use outside of webpages—for

example, in PDF documents, site-specific browsers, and desktop widgets—is also significant. Newer and faster JavaScript VMs and platforms built upon them (notably Node.js) have also increased the popularity of JavaScript for server-side web applications.

On the client side, JavaScript was traditionally implemented as an interpreted language but just-in-time compilation is now performed by recent (post-2012) browsers.

DATABASE TABLES:

USER REG TABLE

NAME	NULL/NOTNULL	TYPE	KEY
ID	NOTNULL	INT	PRIMARYKEY
NAME	NULL	VARCHAR(50)	
DOB	NULL	DATETIME	
GENDER	NULL	VARCHAR(10)	True/False Based Question Table
BRANCH	NULL	VARCHAR(20)	
COLLEGE	NULL	VARCHAR(50)	
UID	NULL	VARCHAR(50)	
PWD	NULL	VARCHAR(20)	
RPWD	NULL	VARCHAR(20)	
UTYPE	NULL	VARCHAR(20)	
QUE	NULL	VARCHAR(500)	
ANS	NULL	VARCHAR(500)	
NAME	NULL/NOTNULL	TYPE	KEY
ID	NOTNULL	INT	PRIMARYKEY
QUE	NULL	VARCHAR(500)	
AW	NULL	VARCHAR(500)	

True/False Based Answer Table

NAME	NULL/NOTNULL	TYPE	KEY
ID	NOTNULL	INT	FOREIGNKEY
AW	NULL	VARCHAR(500)	

Options Based Question Table

NAME	NULL/NOTNULL	TYPE	KEY
QID	NOTNULL	INT	PRIMARYKEY
QN	NULL	VARCHAR(500)	
OPTIONS1	NULL	VARCHAR(100)	
OPTIONS2	NULL	VARCHAR(100)	
ANSWER	NULL	VARCHAR(100)	

Options Based Answers

NAME	NULL/NOTNULL	TYPE	KEY
QID	NOTNULL	INT	FOREIGNKEY
ANSWER	NULL	VARCHAR(10)	

All Student Marks

NAME	NULL/NOTNULL	TYPE	KEY
ID	NULL	INT	
MARKS	NULL	INT	

Exam Schedule

NAME	NULL/NOTNULL	TYPE	KEY
ENAME	NULL	VARCHAR(30)	
EDATE	NULL	DATETIME	

CHAPTER 5

SOFTWARE AND HARDWARE REQUIREMENT

Hardware Requirements: -

- Pentium-IV(Processor).
- 256 MB Ram
- 512 KB Cache Memory
- Hard disk 10 GB
- Microsoft Compatible 101 or more Key Board

Software Requirements: -

- **Operating System:** Windows
- **Web-Technology:** PHP
- **Front-End:** HTML, CSS, JAVASCRIPT
- **Back-End:** MySQL
- **Web Server:** Apache SERVER.

System Requirement Specification:

Functional System Requirement:

This section gives a functional requirement that applicable to the On-Line Exam system.

There are three sub modules in this phase.

- ✓ Candidate module.
- ✓ Examiner module.
- ✓ Administrator module.

The functionality of each module is as follows:

- ✓ **Candidate module:** The candidate will logon to the software and take his examination. He can also check his previous examinations marks and his details. The candidate will get result immediately after the completion of the examination.
- ✓ **Examiner module:** The database is prepared & loaded into the software. Selection for examination can be done language wise by the examiner. The results will be displayed immediately after completion of the examination.
- ✓ **Administrator module:** The administrator collects all the results after successful completion of the examination and sends to the headquarters as and when required.

The features that are available to the Administrator are:

- ✓ The administrator has the full-fledged rights over the OES.
- ✓ Can create/delete an account.
- ✓ Can view the accounts.
- ✓ Can change the password.
- ✓ Can hide any kind of features from the both of users.
- ✓ Insert/delete/edit the information of available on OES.
- ✓ Can access all the accounts of the faculty members/students.

The features available to the Students are:

- ✓ Can view the different categories of Test available in their account.
- ✓ Can change password.
- ✓ Can view their marks.
- ✓ Can view the various reading material.
- ✓ Can view and modify its profile but can modify it to some limited range.

The features available to the Examiner are:

- ✓ Can view the different categories of Test conducted by users.
- ✓ Can change password.
- ✓ Can view their marks.
- ✓ Can view and modify Results.

Non-Functional System Requirements:

. Performance Requirements

Some Performance requirements identified is listed below:

- ✓ The database shall be able to accommodate a minimum of 10,000 records of students.
- ✓ The software shall support use of multiple users at a time.
- ✓ There are no other specific performance requirements that will affect development.

. Safety Requirements

The database may get crashed at any certain time due to virus or operating system failure. Therefore, it is required to take the database backup.

. Security Requirements

Some of the factors that are identified to protect the software from accidental or malicious access, use, modification, destruction, or disclosure are described below. Keep specific log or history data sets

- ✓ Assign certain functions to different modules
- ✓ Restrict communications between some areas of the program
- ✓ Check data integrity for critical variables
- ✓ Later version of the software will incorporate encryption techniques in the user/license authentication process.

Communication needs to be restricted when the application is validating the user or license. (i.e., using https).

Software Quality Attributes

The Quality of the System is maintained in such a way so that it can be very user friendly to all the users.

The software quality attributes are assumed as under:

- ✓ Accurate and hence reliable.
- ✓ Secured.
- ✓ Fast speed.
- ✓ Compatibility.

System Interfaces:

This section describes how the software interfaces with other software products or users for input or output.

User Interface

Application will be accessed through a Browser Interface. The interface would be viewed best using 1024 x 768 and 800 x 600 pixels resolution setting. The software would be fully compatible with Microsoft Internet Explorer for version 6 and above. No user would be able to access any part of the application without logging on to the system.

Hardware Interfaces:

Server Side:

- ✓ Operating System: Windows 9x/xp ,Windows ME
- ✓ Processor: Pentium 3.0 GHz or higher
- ✓ RAM: 256 Mb or more
- ✓ Hard Drive: 10 GB or more

Client side:

- ✓ Operating System: Windows 9x or above, MAC or UNIX.

- ✓ Processor: Pentium III or 2.0 GHz or higher.
- ✓ RAM: 256 Mb or more

Software Interfaces

- **Client Side:** .HTML, Web Browser, Windows XP/2000/Vista
- **Web Server:** .HTML, Windows XP/2000/Vista

Communications Interfaces

The Customer must connect to the Internet to access the Website:

- Dialup Modem of 52 kbps
- Broadband Internet
- Dialup or Broadband Connection with a Internet Provider.

System Models:

In this system we are use waterfall model to apply these ideas. Which is help us to separate each step and when we finish a one phase the output of it is the input to the next phase. Also, we can backwards if there is a new requirement or to apply any update.

System Evolution:

✓ **Including image support:**

Allow to adding students, faculty members and administrator images to the system. Which available for student to ensure that exam for his teacher. Also, the teacher can see his student's image.

✓ **Flags:**

Allow the student to put a symbol near the question that helps the student to return and review the questions and change them accordingly.

✓ **Enable and disable exam:**

Allow the faculty member to control for enable or disable the exam for his students.

✓ **Allow to transfer exam from one subject to another:**

So, that saves the time to rewrite the questions for future course.

✓ **Allow to upload the exam from word or excel file:**

So, that saves the time to enter a question in the on-line system, if the teacher needs not the direct answers.

✓ **Enhanced the questions to be appear as random for each student:**

Make the order of questions as random, or select random questions from a set of questions.

Scope for Enhancement:

Present system carries certain drawbacks and limitations as listed below:-

1. Current system provides only multiple choices but single correct answer selection. Faculty may wish to provide multiple choices multiple selection responses.
2. Incase questions and/or answers need to be in graphics, current system has no provision.
3. Unregistered users cannot answer test, they must belong to some group. This is a drawback incase the faculty wants anyone even anonymous users to answer the test.
4. Top score could be displayed on the home page; but this could be easily implemented while programming the home page.
5. Security logs though not implemented in this system would be well available through the respective database management system and web server software

External Interface Requirements:

Hardware Interfaces

Server side hardware

- Hardware recommended by all the software needed.
- Communication hardware to serve client requests

Client side hardware

- Hardware recommended by respective client's operating system and web browser.
- Communication hardware to communicate the server.

Software Interface

Server side software

- Web server software, Apache Tomcat
- Server side scripting tools: PHP
- Database tools: Sedna native XML DBMS.
- Compatible operating system: Linux

Client side software

- Web browser supporting JavaScript, refer Browser Compatibility 2.3.1

Third Party Software Interfaces

None

Communication Protocol:

Following protocols are required to be permitted on the server side

- HTTP incoming request
- HTTPS incoming request if secure gateway is implemented

Following protocols are required to be permitted on the client side

- HTTP outgoing request
- HTTPS outgoing request if secure gateway is implemented

Assumption and Dependency:

1. Username are valid email addresses of respective user
2. Administrator has the authority to add/delete faculty level accounts.
3. Faculty have the authority to approve/expel student
4. Faculty have the authority to change student's group

Non-Functional Requirements:

- System should be able handle multiple users
- Database updating should follow transaction processing to avoid data inconsistency.

Globalization Support:

The questionnaires and their respective options provided by the faculty may or may not be in English. Hence the questions and their options must be in Unicode format that will accept any Unicode character.

List of Locale

The system will mostly be in US English, although the questions and their options may not be in US English. Hence the questions and their options are to be in Unicode format.

Locale	Date Format	Time Format	Currency Format	Calendar	Character Set
en-US	Use Default	Use Default	Use Default	Use Default	SBCS
Non en-US	dd-MM-yy	HH:mm:ss	Use Default	d-MM-yyyy	MBCS/Unicode

Content to be localized

The following table lists all the possible area in the system and also mentions whether that area should support Globalization.

Interface Type	Needs Localization?
User Interface	Yes*
Emails sent by system,	Yes*
Standard Errors and exceptions logged by system in error log	No
Logos, Images	No
Unit of Measurement (Ex. Length, Weight, Area, Volume, Paper Size etc)	No
Reports	Yes*

*Limited to questionnaires set by user who posted questions.

Security:

- Administrator has the highest authority to edit/delete/create database
- Faculty have the authority to add/expel students
- Students can only view their test records.
- Faculty can view all the test records of every student.
- Critical information like passwords should be transferred in encrypted form
- Passwords should be stored in encrypted form
- Password will not be mailed to the user in case user forgets password, instead either temporary password or a password reset link will be sent.

Reliability:

Data validation and verification needs to be done at every stage of activity.

- Validating user input
- Use of locking mechanism while updating database like transaction processing
- Recovering the transaction using rollback.

Availability:

The examination system being an online system should be available anytime.

Constraints:

Though the system should be available 24x7 some features may be restricted.

- Quiz creator may allow the specific test to be available only at certain time like scheduled examination.
- The test may be time limited so the candidates appearing will have limited time to answer the test.

Portability:

- The web application will be built using PHP which has support to run on any platform provided the required compilers are available.
- For database either XML or MySQL would be used, that too has extensive support over many popular architectures and operating systems.

Constraints:

Portability would be limited to the support provided by the respective application vendor on various architectures and operating environments.

Performance:

The system would be used by multiple users at a time and may grow as time passes; the system would need to implement multithreading to achieve acceptable performance. Further a database connection pool may also be required for assigning faster database connection.

Database Requirements:

Database fields for questions and respective options must be in Unicode format to handle non English characters

Technologies:

This section lists all the technologies for the web based system.

- PHP scripting for server side scripting as it has a very strong support for XML and MySQL.
- XML as database format: The database' performance requirements are not very high and the ability to have custom fields in case the quiz creator needs to add more than expected answer options. This is limited in any other database management system where we have to first specify the maximum number of fields.

- Apache as web server has a tight integration with PHP and is also available for various popular platforms.

CHAPTER 6

SYSTEM DESIGN

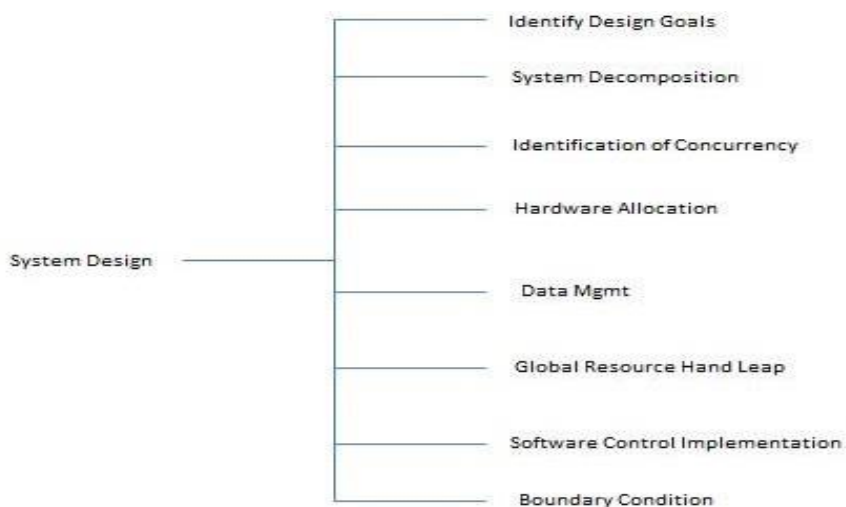
Systems design is the process of defining the architecture, modules, interfaces, and data for a system to satisfy specified requirements. Systems design could be seen as the application of systems theory to product development. There is some overlap with the disciplines of systems analysis, systems architecture and systems engineering.

System design is the phase that bridges the gap between problem domain and the existing system in a manageable way. This phase focuses on the solution domain,

i.e. *“how to implement?”*

It is the phase where the SRS document is converted into a format that can be implemented and decides how the system will operate.

In this phase, the complex activity of system development is divided into several smaller sub-activities, which coordinate with each other to achieve the main objective of system development.



SYSTEM ANALYSIS:

1. Existing System

Existing system is a manual one in which users are maintaining books to store the information like Student Details, Instructor Details, Schedule Details and feedbacks about students who attempted exam as per schedule. It is very difficult to maintain historical data.

DISADVANTAGES:

The following drawbacks of existing system emphasize the need for computerization:

1. A lot of copies of question papers have to be made
2. A lot of correction work hence delay in giving the results
3. A lot of tabulation work for each subject results

2. Proposed System

This application is used to conduct online examination. The students can sit at individual terminals and login to write the exam in the given duration. The questions have to be given to the students. This application will perform correction, display the result immediately and also store it in database. This application provides the administrator with a facility to add new exams. This application provides the Instructor

add questions to the exam, modify questions in the exam in a particular exam. This application takes care of authentication of the administrator, Instructor as well as the student.

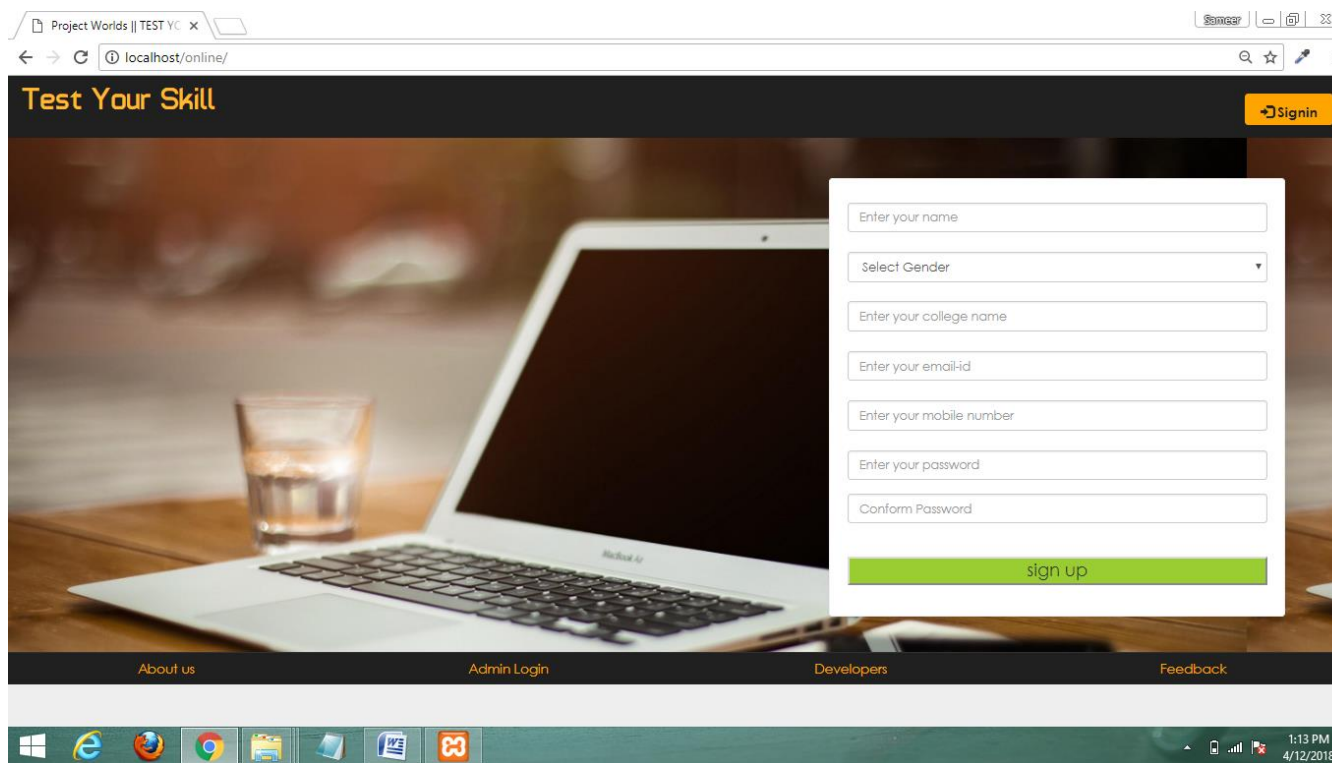
3. Objective of the System

The objective of the Online Examination Tool is to provide better information for the users of this system for better results for their maintenance in student examination schedule details and grading details.

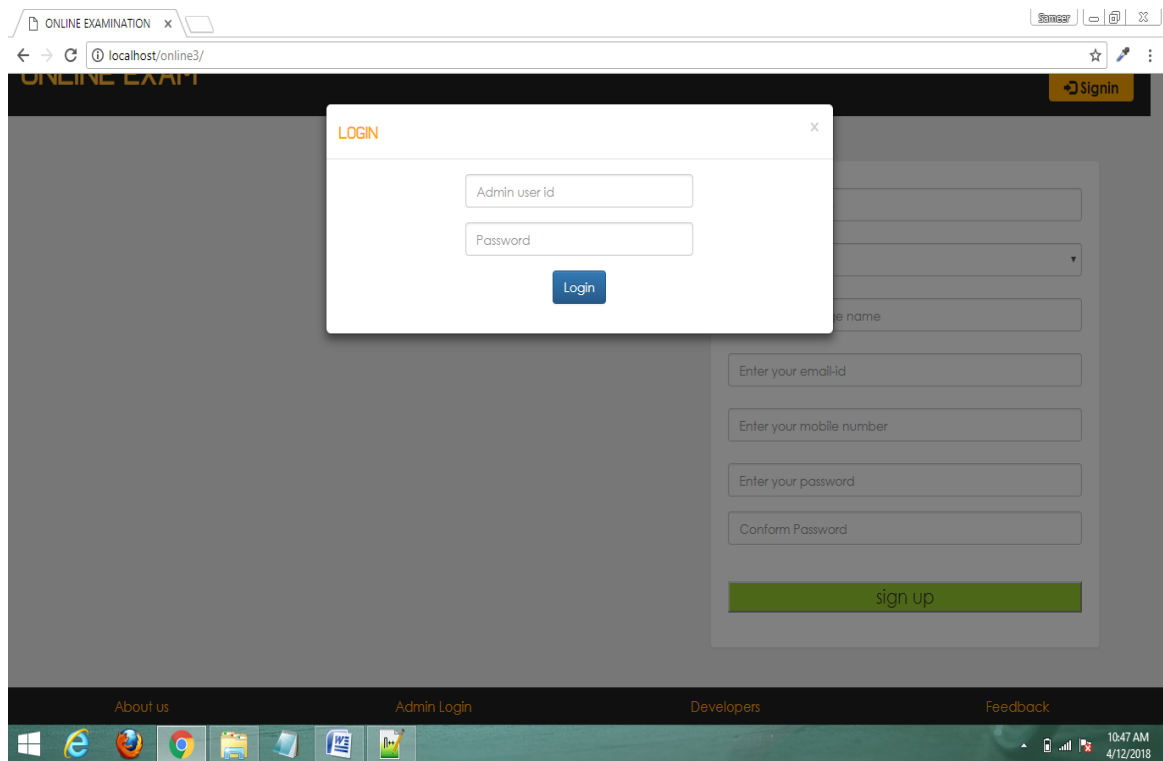
CHAPTER 7

SCREENSHOT

HOME PAGE:



ADMIN LOGIN:



TEST PAPER:

The screenshot shows a web browser window with two tabs labeled 'Project Worlds || TEST YC'. The address bar shows 'localhost/online/account.php?q=1'. The page has a dark header with the title 'Test Your Skill' and a user greeting 'Hello, Deepak' with a 'Signout' link. Below the header is a navigation bar with 'Netcamp', 'Home', 'History', 'Ranking', 'Signout', an 'Enter tag' input field, and a 'Search' button. The main content area features a table of test papers with columns for S.N., Topic, Total question, Marks, Time limit, and a 'Start' button. The table lists six test papers: 1. Linux :vi Editor (5 questions, 10 marks, 10 min), 2. Linux:startup (5 questions, 10 marks, 10 min), 3. Networking (2 questions, 4 marks, 5 min), 4. C++ Coding (2 questions, 4 marks, 5 min), 5. Php Coding (2 questions, 4 marks, 5 min), and 6. Linux : File Managment (2 questions, 4 marks, 5 min). The footer contains links for 'About us', 'Admin Login', 'Developers', and 'Feedback'. The Windows taskbar at the bottom shows various application icons and the system clock indicating 1:15 PM on 4/12/2018.

S.N.	Topic	Total question	Marks	Time limit	
1	Linux :vi Editor	5	10	10 min	Start
2	Linux:startup	5	10	10 min	Start
3	Networking	2	4	5 min	Start
4	C++ Coding	2	4	5 min	Start
5	Php Coding	2	4	5 min	Start
6	Linux : File Managment	2	4	5 min	Start

TEST QUESTIONS:

The screenshot shows a web browser window with two tabs labeled 'Project Worlds || TEST YC'. The address bar shows the URL: `localhost/online/account.php?q=quiz&step=2&eid=558920ff906b8&n=1&t=2`. The page has a dark header with the title 'Test Your Skill' on the left and a user greeting 'Hello, Deepak' and a 'Signout' link on the right. Below the header is a navigation bar with links: 'Netcamp', 'Home', 'History', 'Ranking', 'Signout', an 'Enter tag' input field, and a 'Search' button. The main content area features a white box containing a question: 'Question 1 :: what is command for changing user information??'. Below the question are four radio button options: 'usermod', 'useradd', 'useralter', and 'groupmod'. A blue 'Submit' button is at the bottom of the options. The footer of the page contains four links: 'About us', 'Admin Login', 'Developers', and 'Feedback'. The Windows taskbar at the bottom shows icons for the Start menu, Internet Explorer, Firefox, Chrome, File Explorer, and a calendar app, with the system clock indicating 1:15 PM on 4/12/2018.

Project Worlds || TEST YC x Project Worlds || TEST YC x

localhost/online/account.php?q=quiz&step=2&eid=558920ff906b8&n=1&t=2

Test Your Skill

Hello, Deepak Signout

Netcamp Home History Ranking Signout Enter tag Search

Question 1 ::
what is command for changing user information??

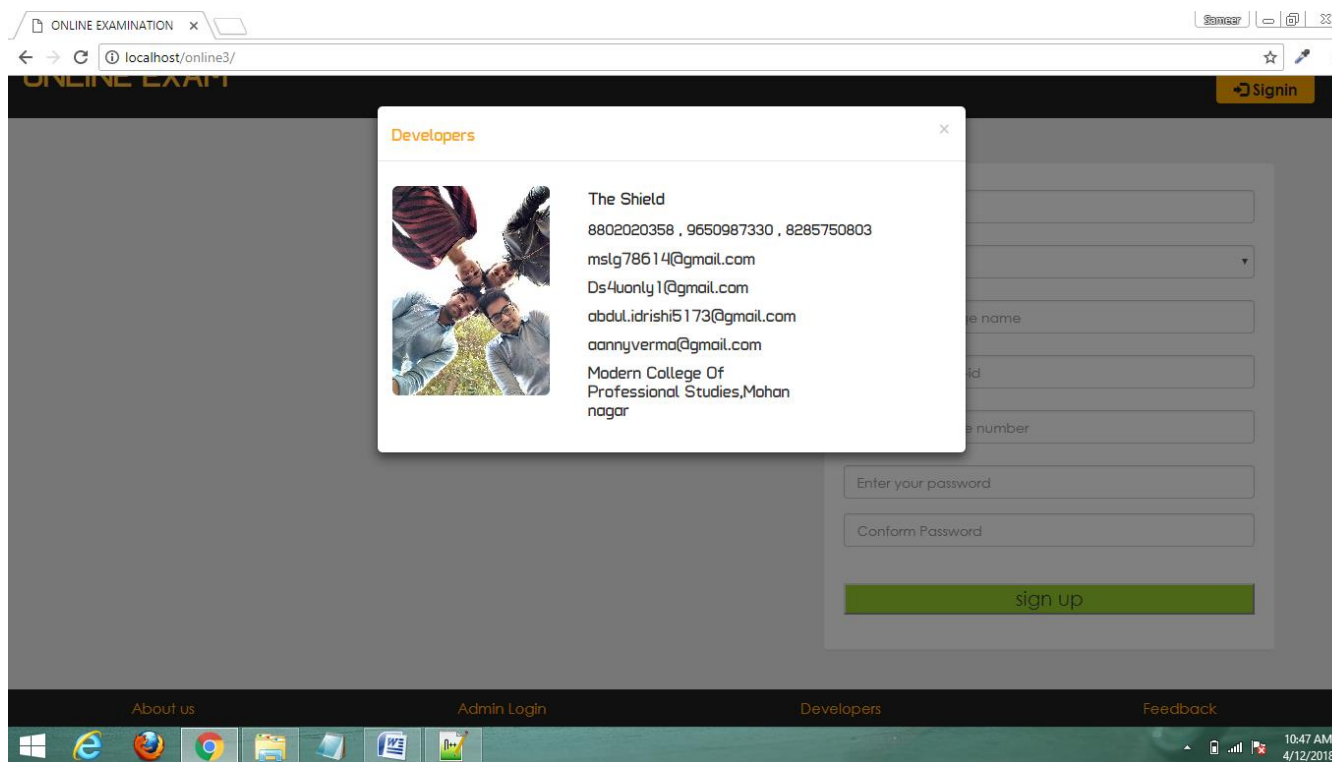
- ☐ usermod
- ☐ useradd
- ☐ useralter
- ☐ groupmod

Submit

About us Admin Login Developers Feedback

1:15 PM 4/12/2018

DEVELOPERS:



FEEDBACK:

The screenshot shows a web browser window with multiple tabs labeled 'ONLINE EXAMINATION' and one tab labeled 'Project Worlds || FEEDBACK'. The address bar shows 'localhost/online3/feedback.php'. The page has a dark header with the text 'Test Your Skill' and two buttons: 'Home' and 'Signin'. The main content area features a feedback form with a blue and green abstract background. The form includes the title 'FEEDBACK/REPORT A PROBLEM', instructions on how to provide feedback via email or the form, and input fields for Name, Subject, and E-Mail address, followed by a large text area for feedback and a 'Submit' button.

Test Your Skill Home Signin

FEEDBACK/REPORT A PROBLEM

You can send us your feedback through e-mail on the following e-mail id:
msg78614@gmail.com

Or you can directly submit your feedback by filling the enteries below:-

Name:

Subject:

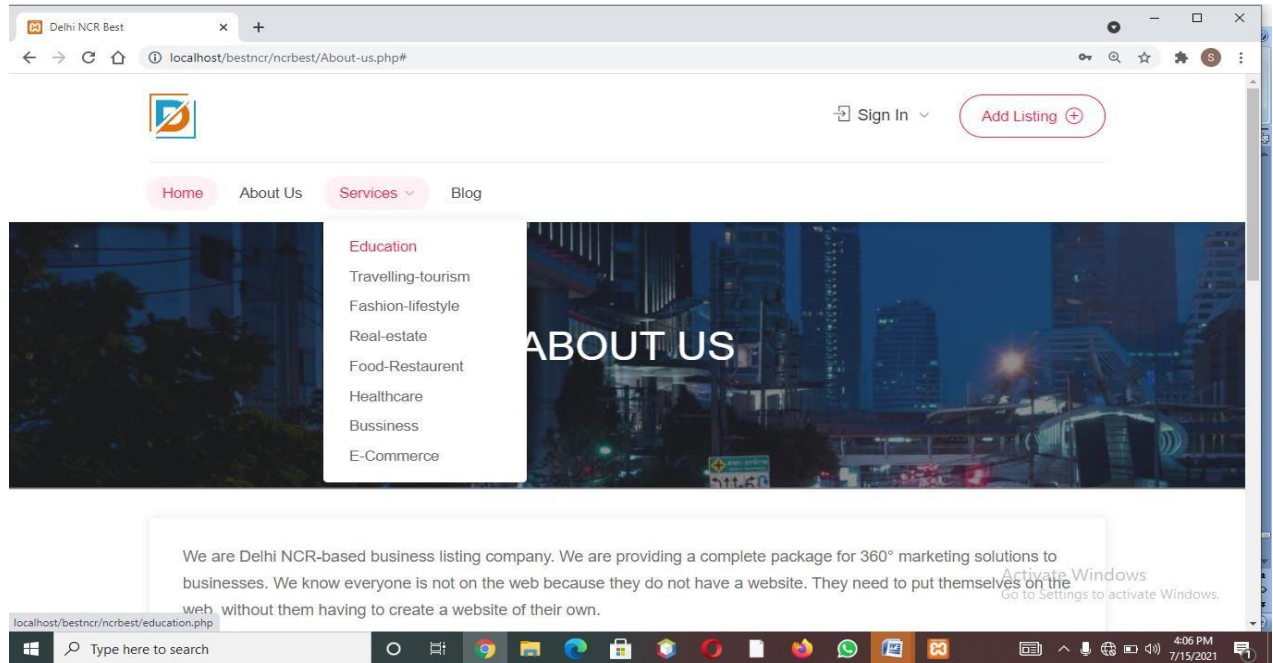
E-Mail address:

Write feedback here...

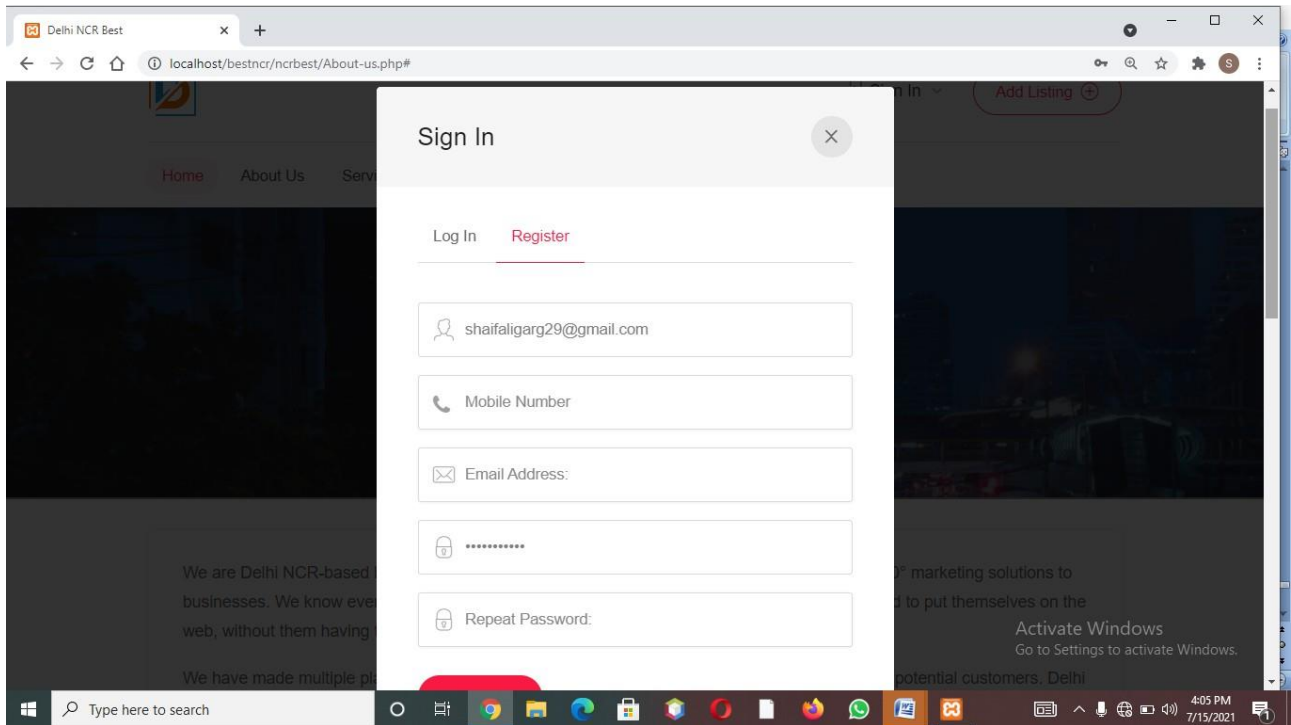
Submit

Windows taskbar shows icons for Internet Explorer, Firefox, Chrome, File Explorer, and other applications. The system clock indicates 10:38 AM on 4/12/2018.

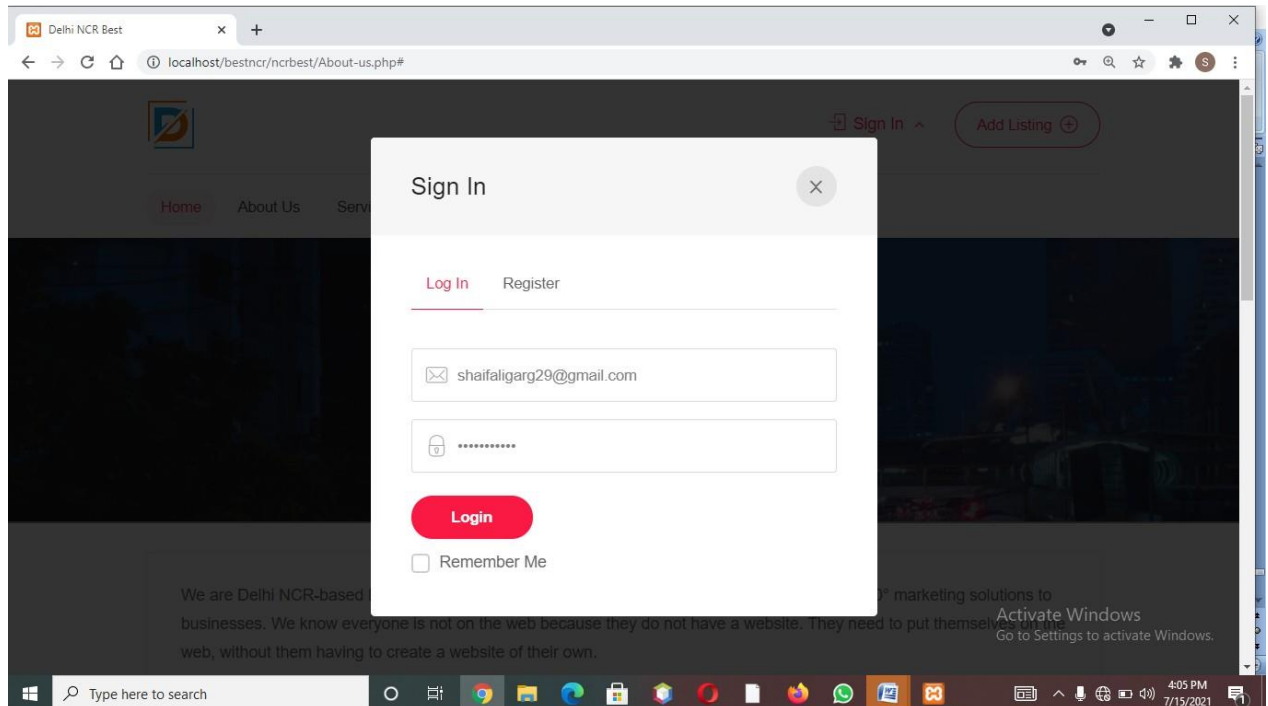
Services:



Register page:



Sign in:



CHAPTER 8

TESTING

Software testing is the process of executing a program with intension of finding errors in the code. It is a process of evolution of system or its parts by manual or automatic means to verify that it is satisfying specified or requirements or not.

Generally, no system is perfect due to communication problems between user and developer, time constraints, or conceptual mistakes by developer.

To purpose of system testing is to check and find out these errors or faults as early as possible so losses due to it can be saved.

Testing is the fundamental process of software success.

Testing is not a distinct phase in system development life cycle but should be applicable throughout all phases i.e. design development and maintenance phase.

Testing is used to show incorrectness and considered to success when an error is detected.

OBJECTIVES OF SOFTWARE TESTING

The software testing is usually performed for the following objectives: -

SOFTWARE QUALITY IMPROVEMENT: - The computer and the software are mainly used for complex and critical applications and a bug or fault in software causes severe losses. So a great consideration is required for checking for quality of software.

VERIFICATION AND VALIDATION: -

Verification means to test that we are building the product in right way.i.e. are we using the correct procedure for the development of software so that it can meet the user requirements.

Validation means to check whether we are building the right product or not.
SOFTWARE RELIABILITY ESTIMATION: - The objective is to discover the residual designing errors before delivery to the customer. The failure data during process are taken down in order to estimate the software reliability.

PRINCIPLES OF SOFTWARE TESTING

Software testing is an extremely creative and challenging task. Some important principles of software testing are as given: -

All tests should be traceable to customer requirements.

Testing time and resources should be limited i.e. avoid redundant testing.

It is impossible to test everything.

Use effective resources to test.

Test should be planned long before testing begins i.e. after requirement phase.

Test for invalid and unexpected input conditions as well as valid conditions.

Testing should begin in “in the small” and progress towards testing “in the large”.

For the most effective testing should be conducted by an independent party.

Keep software static (without change meanwhile) during test.

Document test cases and test results.

Examining what the software not doing which it expected to do and also checking what it is doing that was not expected to do.

STRATEGY FOR SOFTWARE TESTING

Different levels of testing are used in the test process; each level of testing aims to test different aspects of the system.

The first level is unit testing. In this testing, individual components are tested to ensure that they operate correctly. It focuses on verification efforts.

The second level is integration testing. It is a systematic technique for constructing the program structure. In this testing, many tested modules are combined into the subsystem which are then tested. The good here is to see if the modules can be integrated properly.

Third level is integration testing. System testing is actually a series of different tests whose primary purpose is to fully exercise computer based system. These tests fall outside scope of software process and are not conducted solely by software engineers.

CHAPTER 9

FUTURE SCOPE

This application avoids the manual work and the problems concern with it. It is an easy way to obtain the information regarding the different scheduled examinations information that are

Currently issued.

Well I and my team members have worked hard in order to present an improved website better than the existing one's regarding the information about the various activities. Still, we found out that the project can be done in a better way. Primarily, when we request information about a particular schedule it just shows the exam date and platform. So, after getting the information we can get access to the online exam.

The enhancement that we can add the searching option. We can directly search to the particular student details from this site.

REFERENCES

- [1] Albert H., Judd, Rivers, (2006) "Creating a winning E-Business", Wagner Course Technology Thomson Learning, pp. 37-255
- [2] Alawneh A., and Hattab E, (2007) "E-Business Value Creation: An Exploratory Study, Proceedings of the Seventh International Conference on Electronic Business", Taipei, pp. 181-188.
- [3] Alawneh A., and Hattab E (2009). "International Arab Journal of eTechnology", Vol. 1, No. 2, pp. 1-8
- [4] Amit B. and Steve M. (2007), "How to Plan E-Business Initiatives in Established Companies", Vol. 49, No. 1, pp. 11-22
- [5] Aranda-M., G. and Stewart, P. (2005), "Barriers to E-Business Adoption in construction international literature review", pp. 33-49
- [6] Ayo, Charles K. (2006). "The Prospects of e-Commerce Implementation in Nigeria, Journal of Internet Banking and Commerce", Vol. 11, No.3, pp. 68-75
- [7] Amar. K., Sohani, (2009), "Technology and Banking Sector", ICFAI University Press, pp. 1-39
- [8] Brahm C., (2009) "E-Business and Commerce Strategic Thinking and Practice", Houghton Mifflin, pp. 114-312.
- [9] Chiemeké, S. C., Ewuekpae, A. and Chete, F. (2006), "The Adoption of Internet Banking in Nigeria: An Empirical Investigation, Journal of Internet Banking and Commerce", vol. 11, No.3, pp 33-49
- [10] David W, (2001) "E-Commerce Strategy, Technologies and Applications", Tata McGraw Hill, pp. 3-143.
- [11] Daft, Richard L. (1982), "Bureaucratic Versus Nonbureaucratic Structure and the process of Innovation and Change", pp. 129-166
- [12] Earl, M. (2000), "Evolving the E-Business, Business Strategy Review", pp. 33-38
- [13] Eben.O (2003) "A Systematic Approach to E-Business Security", pp. 87-103
- [13] Hackbarth, G. & Kettinger W. J. (2000), "Building an E-Business Strategy: Information Systems Management" pp. 78-90.
- [14] Kalakota, R. and Robinson M. (1999), "E-Business: Roadmap for success", Addison-Wesley, 112-149
- [15] Karjaluoto H., Mattila M. (2002). "Electronic Banking in Finland: Consumer Beliefs and Reactions to a New Delivery Channel, Journal of Financial Services Marketing", Vol. 6, No. 4, 2002, pp. 346-361
- [16] Laudon, K. and Traver, C. (2008), "E-Commerce: Business, Technology, Society", 4th Edition, Prentice Hall, pp.48-67
- [17] Melao, N. (2008), "E-Business Processes and E-Business Process Modeling: A State-of-the-Art Overview", pp. 54-89

- [18] Mendo, F. and Fitzgerald, G. (2005), "Theoretical Approaches to Study SMEs E-Business Progression", Journal of Computing and Information Technology, Vol. 13, No. 02, pp. 123-136
- [19] Namita.R (2011). "Global Journal of Enterprise Information System", Vol. 3, No. 1, pp. 17-31
- [20] Peterson O,(2009), "Communications of the IBIMA", Vol. 8, Issue No. 3, pp. 175-190