

# Guidelines for Thesis/Project Report

Department of Information Technology, Tripura University

## GENERAL RULES AND REGULATIONS

- For BCA, projects can be product development type (or project type may depend upon project guide).
- For MCA there can be two types of projects: Product development type, Research type. (or type may depend upon project guide)
- Students have to report to their respective project guide at least once in a week and have to show their progress work.
- Students have to present two presentations, one in the middle of semester and another prior to the final project presentation.
- Students have to strictly follow the departmental project format, which is available in departmental website.
- Students have to submit their thesis/project report before ten (10) days of final presentation day that will be notified by department.
- Thesis/Project report should be hard binding.
- For any suggestions, problems and issues regarding project works, students should contact to their respective guide allotted to them, and then they should contact to the project coordinator, and then to HoD.

## INSTRUCTIONS

- **Size:** A4 (8.27 x 11.69)
- **Margin for all pages:** Top = 1 inch, Bottom=1 inch, Left =1.5 inch, Right=1 inch
- **Font:** Times New Roman
- **Title of chapter:** 18 pt. Bold and Title case

- **Font Size for Headings:** 18. Bold and Title case
- **Font Size for Sub-Headings:** 16 pt. Bold and Title case
- **Font Size for Section:** 16 pt. Bold and Title case
- **Font Size for Sub Section:** 16 pt Bold and Title case
- **Font size for Text:** 12 pt
- **Line Space for Text:** 1.5 line space
- **Paragraph:** 6 pt. Space before and after paragraph and **Alignment:** Justify
- **Reference:** Align= justify, Line Space= single and 6pt. Space before the next reference.  
NB: follow IEEE format of papers and books.
- **Text Color:** Black

## **WHAT SHOULD BE INCLUDED IN A THESIS**

This paragraph is Not for "Product development type Project Report", but only for "Research type project i.e. thesis"

The exact format of the thesis may be given by the concerned supervisor. For a research type of project, the report may take the form of an article with the following contents: Description of the general area of the problem along with its relevance, and scope for interesting work, Literature survey, formal definition of the problem, evaluation metrics, issues in the problem, Proposed approaches, Implementation details: system architecture, algorithms, etc., Experiments and results, analysis of the results, Remarks regarding future work possible.

## **REPORT STRUCTURE**

Front Page

Undertaking

Certificate

Acknowledgement

Abstract

List of Contents

List of Figures

List of Tables (if any)  
Chapter 1: Introduction  
1.1. Problem Definition  
1.2. Overview of the Proposed Approach  
1.3. Motivation behind the Proposed Approach  
1.4. Organization of the Report  
1.5. .. etc  
Chapter 2: Background Details  
Chapter 3: Related Work  
Chapter 4: Proposed Approach  
Chapter 5: Experimentation and Results  
Chapter 6: Conclusion and Future Works  
Appendix  
Bibliography

## **GENERAL GUIDELINES FOR WRITING PROJECT REPORT**

The exact format of the thesis/project report may be given by the concerned supervisor. The following guidelines are supposed to be followed while writing the reports of the BCA/MCA final semester projects carried out by the students at various organizations:

1. Fonts, margins, paper size etc. should be according to the format specified in Standard Template to be used for writing Report Section. These specifications primarily for the reports to be submitted to the department.
2. If the organization where the project was carried out has some other specification the report submitted to them may be according to their specification. Also, the format of the certificate by the supervisor is for the supervisor at TU only.
3. For the reports submitted by single student, the roll no. in the cover page can be put in a separate line below the name. If there are two guides, insert one more column in the corresponding table.
4. Start writing the report from the initial stage of the project. First create a template containing the names of the chapters and the sections.
5. Do not leave spaces before full-stop, comma, etc.
6. Leave a space after full-stop, comma, etc.

7. Justify your text.
8. Run spell-checker and correct all misspelt words, if any.
9. Read the report once without skipping to remove grammatical errors. Preferably get a friend to repeat this same exercise.
10. Do not use half words such as - deptt, it's, govt., etc. in any formal written text.
11. Do not reproduce routine stuff in various sections of your report, such as: "...feasibility analysis is also called cost benefit analysis..., ...System analysis is the most important phase in the software development...". These are known facts and one can get this information from textbooks. You have to put these knowledge into practice. So in your report bring out how this knowledge has been used in your project. In the template that is included some such points are given, especially those within square braces ([ ]). Do not reproduce such portions in your report.
12. In the Context diagram and DFD's, label all the data flow arcs. Do not label boxes with vague terms such as "user" (whoever interacts with the system is a "user"). Mention clearly who is the person who will perform each particular interaction, viz. "Chief Geological officer", "Land Deptt office assistant", "Civil Deptt Engr.", etc.
13. A rough guideline that you can keep in mind is that each information flow from a user to (any module of) the system should correspond to an input form (or a set of input forms) that you have implemented. Similarly, each output from the system to the user should correspond to some report that you have designed. If a particular report is produced by the system against certain input (form) shown by data arcs, then you may show this as two arcs in opposite direction between the system (module) and the user box. Any other pair of interaction (input, output) should be shown with another box.
14. Do not repeat things in the report. Do not worry about the report being too thin! There are enough essential information without repetition and chances are that you shall have to work hard to put all that in.
15. Start writing the Acknowledgement section from the initial stage of the project. In this mention the names of the persons who help you in various stages of the project and also briefly mention the nature of the help. It is important not to miss out mention of any such person in this section. Finally, however you may arrange this section appropriately.
16. Start creating the Bibliography section from the initial stage of the project. Use the format given in the specified file available in Standard Template to be used for writing Report. In this section, mention the name of any book, research paper, article, website, etc., that you may have referred for the purpose of this project. Even a book on software engineering, for instance, should find a place in this section if you referred it for clarifying some procedural points.

## **STANDARD TEMPLATE FOR WRITING PROJECT REPORT**

Standard Template to be used for writing "product development type of project report" are given below. Student should strictly follow formatting as specified in the template for writing project report.

The project report should be a "wholesome" documentation of the project done. The exact format of the report may depend on the nature of the problem as well as the approach followed. As an example, an outline of a project report is presented here. A very rudimentary template is included assuming a project for Land Acquisition System of XYZ Corporation. Many details in this template are particular to the example, but students are expected to extract the objectives of each section in the report from the example. The example given in the template will guide you for writing contents in a progress report (but not for thesis).

### **VERSION HISTORY**

Version 2.0, Dated: 14.06.2013

Version 1.1, Dated: 19.09.2012

Version 1.0, Dated: 03.09.2012

**Title of project report/thesis** "font 18, bold"

Thesis/Project report submitted in partial fulfillment of the requirements for the award  
of the degree of "font 12"

**Bachelor/Master of Computer Application** "font 16, bold"

by

**Student Name** "font 14, bold"

12MCA001"font 14"

Under the Supervision and Guidance of "font 12"

**Dr. Supervisor Name** "font 12, bold"

Assistant Professor, Department of IT "font 12"



**Department of Information Technology** "font 14, bold"

TRIPURA UNIVERSITY

(A Central University)

Suryamaninagar, Tripura, India - 799022 "font 14"

**June, 2013** "font 12"

# UNDERTAKING

I declare that the work which is being presented in this project report entitled “*Title of project report/thesis*”, submitted to the Information Technology Department, Tripura University, for the award of the degree of ***Bachelor/Master of Computer Application***, is an authentic record of my own work carried out under the supervision and guidance of Dr. Supervisor Name. I have not plagiarized or submitted the same work for the award of any other degree. In case this undertaking is found incorrect, I accept that my degree may be unconditionally withdrawn.

June, 2013

Agartala

---

(Student Name)

# CERTIFICATE OF APPROVAL

Certified that the work contained in the project report entitled “*Title of project report/thesis*”, by *Student Name*, Registration Number *12MCA001* to Tripura University, Suryamaninagar, India, is a record of bonafide project work carried out under my supervision and guidance and is worthy of consideration for the award of the degree of Bachelor/Master of Computer Application of the University.

---

Dr. Professor Name  
(Project Supervisor)  
Assistant Professor  
Department of Information Technology  
Tripura University

---

Dr. Coordinator Name  
(Project Coordinator)  
Associate Professor  
Department of Information Technology  
Tripura University

---

Prof. HoD Name  
(Head of the Department)  
Professor  
Department of Information Technology  
Tripura University



# **CERTIFICATE**

This is to certify that the project entitled Title of project report/thesis submitted by Student Name, Registration No 12MCA001 is approved for the award of Degree of Bachelor/Master of Computer Application and the project evaluation and viva-voce examination has been held on date.

---

INTERNAL EXAMINER

---

EXTERNAL EXAMINER

---

# Acknowledgement

---

I would like to take this opportunity to express my deep sense of gratitude to all who helped me directly or indirectly during this thesis work.

Firstly, I would like to thank my supervisor, **Dr. Supervisor Name**, for being a great mentor and the best adviser I could ever have. His advise, encouragement and critics are source of innovative ideas, inspiration and causes behind the successful completion of this dissertation. The confidence shown on me by him was the biggest source of inspiration for me. It has been a privilege working with him from last six month.

I am highly obliged to all the faculty members of Information Technology Department for their support and encouragement. I also thank our Vice Chancellor **Prof.VC name** and HoD, Information Technology Department **Prof. HoD Name** for providing excellent computing and other facilities without which this work could not achieve its quality goal. I would like to express my sincere appreciation and gratitude towards **Alak Roy and Abhishek Das**, Assistant Professors of Information Technology department for there support to prepare the progress report in  $\LaTeX$ .

Finally, I am grateful to my **parents** for their support. It was impossible for me to complete this thesis work without their love, blessing and encouragement.

**- Student Name Here**

---

Dedicated to

---

*To My Loving Family for their kind love & support.*  
*To my project supervisor Prof. Supervisor Name for sharing his valuable knowledge,*  
*encouragement & showing confidence on me all the time.*

***“You can’t teach people everything they need to know. The best you can do is position them where they can find what they need to know when they need to know it.”***

**-Seymour Papert (MIT Mathematician)**

---

# Abstract

---

Write your abstract here. Each project report must contain an abstract. The abstract is expected to give a succinct account of the project report so that a reader can decide whether to read the complete work.

The abstract should be within 150 to 300 words, the abstract cannot exceed one page. An abstract contains a statement of the problem, the procedure or methods used, the results and the conclusions. The abstract should be inserted before table of contents.

---

# Contents

---

<b>Acknowledgement</b>	<b>v</b>
<b>Dedicated to</b>	<b>vi</b>
<b>Abstract</b>	<b>viii</b>
<b>1 Introduction</b>	<b>1</b>
1.1 Project Profile . . . . .	1
1.2 Overview . . . . .	2
1.3 Motivation . . . . .	2
1.4 Goal . . . . .	2
1.5 Organization of the Report/Thesis . . . . .	2
<b>2 Initial System Study</b>	<b>3</b>
2.1 Chapter Introduction . . . . .	3
2.2 About Organization . . . . .	3
2.3 Drawbacks of the existing system . . . . .	4
2.4 Problem definition . . . . .	4
2.5 The proposed system . . . . .	4
2.6 Scope of the system . . . . .	5
2.7 Scope of this project . . . . .	6
2.8 System development approach . . . . .	6

2.8.1	Subsection here . . . . .	6
<b>3</b>	<b>Feasibility Analysis</b>	<b>7</b>
3.1	Section Name . . . . .	8
<b>4</b>	<b>System Analysis</b>	<b>9</b>
4.1	Introduction . . . . .	9
4.2	Data flow diagram of the land acquisition process . . . . .	11
4.3	Entity relationship diagram . . . . .	12
4.4	Physical and behavioural aspects of the system . . . . .	12
4.4.1	Sub section here . . . . .	12
<b>5</b>	<b>Software Requirements Specifications</b>	<b>15</b>
5.1	General Description . . . . .	15
5.1.1	Product Perspective . . . . .	15
5.1.2	Product Functions . . . . .	16
5.1.3	User Characteristics . . . . .	16
5.1.4	General Constraints . . . . .	16
5.1.5	Assumptions and Dependencies . . . . .	16
5.1.6	Functional Requirements . . . . .	17
5.1.7	Functional Requirement 1 . . . . .	17
5.2	External Interface Requirements . . . . .	17
5.2.1	User Interfaces . . . . .	17
5.2.2	Hardware Interfaces . . . . .	17
5.2.3	Software Interfaces . . . . .	17
5.3	Performance Requirements . . . . .	18
5.4	Design Constraints . . . . .	18
5.4.1	Standard Compliance . . . . .	18
5.4.2	Hardware Constraints . . . . .	18
5.4.3	Other Requirements . . . . .	18
5.4.4	Scope of this project . . . . .	18
<b>6</b>	<b>System design</b>	<b>19</b>
6.1	Introduction . . . . .	19
6.2	System Architecture . . . . .	19

6.3	Module Design . . . . .	20
6.4	Database Design . . . . .	20
6.5	Input Output Design . . . . .	20
6.6	Algorithm design . . . . .	21
6.7	Electronic Data Communication Design . . . . .	21
6.8	System Maintenance . . . . .	21
6.9	Other Alternatives Considered . . . . .	22
<b>7</b>	<b>System Implementation</b>	<b>23</b>
7.1	Hardware Components . . . . .	23
7.2	Software Environment . . . . .	23
7.3	System Development Platform . . . . .	24
7.4	Project Accomplishment Status . . . . .	24
7.5	Guidelines for Continuation . . . . .	24
7.6	Hardware Components . . . . .	24
7.7	Software Environment . . . . .	24
<b>8</b>	<b>System Testing</b>	<b>25</b>
8.1	Test Plan . . . . .	25
8.2	Test Cases . . . . .	25
<b>9</b>	<b>Conclusion &amp; Future Direction of Work</b>	<b>26</b>
9.1	Conclusion . . . . .	26
9.2	Future Direction of work . . . . .	26
	<b>References</b>	<b>27</b>
<b>A</b>	<b>User Manual</b>	<b>29</b>
A.1	Installation Manual . . . . .	29
A.2	Reference Manual . . . . .	29
A.3	Maintenance Manual . . . . .	29
<b>B</b>	<b>Test Report</b>	<b>30</b>
<b>C</b>	<b>Input Output Formats</b>	<b>31</b>
C.1	Paper Forms used in the Organisation . . . . .	31



C.2	Input Forms in the New System . . . . .	31
C.3	Output Formats in the New System . . . . .	31
<b>D</b>	<b>Source Code</b>	<b>32</b>

---

# List of Figures

---

1	IEEE LTSA Client Server Architecture[6] . . . . .	5
2	IEEE LTSA in SOA environment . . . . .	8
3	Give a caption to your image here . . . . .	13
4	caption of image here . . . . .	16

---

## List of Tables

---

# Chapter *1*

---

## Introduction

---

A humble introduction to the general area of the problem, pointing out its relevance, and scope for interesting work. Information processing is a very vital activity of any organization. Readily available information in more user analyzable format is the key behind a successful organization as it helps immensely in major decision making process. To achieve this goal data management and faster computing capability for data analysis is needed. Computer based information systems are playing a key role in this regard. The work being described here is related to information processing of the land acquisition process of XYZ Corporation.

[Write one paragraph about what one means by land acquisition process and why is land acquisition done. Who all are involved and state why the current process needs to be computerized?]

[One paragraph about how you got to take up this project and what you have accomplished within this exercise.]

### **1.1 Project Profile**

Project Profile section is not required for research type projects. For product development type projects. [present an item-wise project profile mentioning, for instance the following points: Title of the project, person who has done the project (your name), Supervisor, Organizations involved, project locations, duration, computing environments, etc.]

## **1.2 Overview**

Overview section is not required for product development type project report. For research type projects, write down one paragraph on overview of the proposed approach, etc..

## **1.3 Motivation**

Motivation section required both for product development type and research type projects. Write down one paragraph on motivation behind the proposed work/approach, etc..

## **1.4 Goal**

Goal section required both for product development type and research type projects. Write goal of your project.

## **1.5 Organization of the Report/Thesis**

Organize your content chapters and mention here.

# Chapter 2

---

## Initial System Study

---

### 2.1 Chapter Introduction

You will basically attempt to develop a solution to some problem. In this chapter start with a brief description of that problem, how things are done with the problem existing, drawbacks in that approach, a single-line definition of the problem, a brief description of the proposed solution (The solution may be a big one, which you may not attempt to complete in the present work), scope of the solution (irrespective of the extent of your current work), scope of your work (the portion of the proposed solution that you cover in your work), and system development approach. Include a general architecture of your proposed solution[6]. "Times New Roman, 12, justify"

[About one page about XYZ Corp]

### 2.2 About Organization

The Land Department is one of the several departments under XYZ Corp that is responsible for acquiring and subsequently, releasing any land area that has been found to have the possible potential of yielding ore. The complete process of acquiring of land till its release for extraction of ore to the concerned department is very critical and time bound, because it involves large

sums of money. Briefly stated, the process of land acquisition involves the geological department which identifies the land to be acquired, the Civil department which conducts the survey of the land and makes various estimates, and the land department which interacts with the public administration authorities and the owners/occupiers of the land to be acquired. The process is well defined and there are well defined formats for representing relevant information at the different stages. Presently, the process is manual.

## **2.3 Drawbacks of the existing system**

The present system is completely manual and hence it has the usual drawbacks of a manual system, such as inconvenient operation, poor security, and poor efficiency.[6] (figure.1)

- *Layer 1:* This level defines the tasks of acquisition, transfer, exchange and discovery for the learner as a result of the interactions with his environment.
- *Layer 2:* This layer defines the learners reaction to the environment. The definition is based on the specific design features of learner related modules.
- *Layer 3:* A component system, normalized by IEEE, defines an organization of a learning process, seen from the data and control flow point of view.

## **2.4 Problem definition**

Problem definition of your thesis will be here. [Give a single line statement of the problem. For example: "To have a computerized system to perform the information processing part in the land acquisition system in XYZ Corp."]

## **2.5 The proposed system**

It has been proposed to computerise the information processing of the overall land acquisition process of XYZ Corp. In this proposed system we wish to overcome the drawbacks of the existing manual system in the following ways: 1. Increase efficiency and convenience by computerising processing and transfer of information. 2. Increase efficiency and reliability by suitable electronic medium for data storage. 3. Increase information security by using suitable security model for information storage and processing. 4. Increase effectiveness by providing

efficient and convenient information retrieval methods, and by providing value added information output.

## 2.6 Scope of the system

The proposed system computerises the information processing of that portion of the overall land acquisition process that is done within XYZ Corp. It encompasses all the stages starting from the Geological department making the request to the Civil department (in a Land Acquisition Form) to conduct the initial survey and estimation of the land to be acquired, till the actual acquisition of the land. Input of data can be stage wise as each stage completes and reports generated for each stage.

[Include a Context Diagram here]

Random text typed here as an example, write your own text here

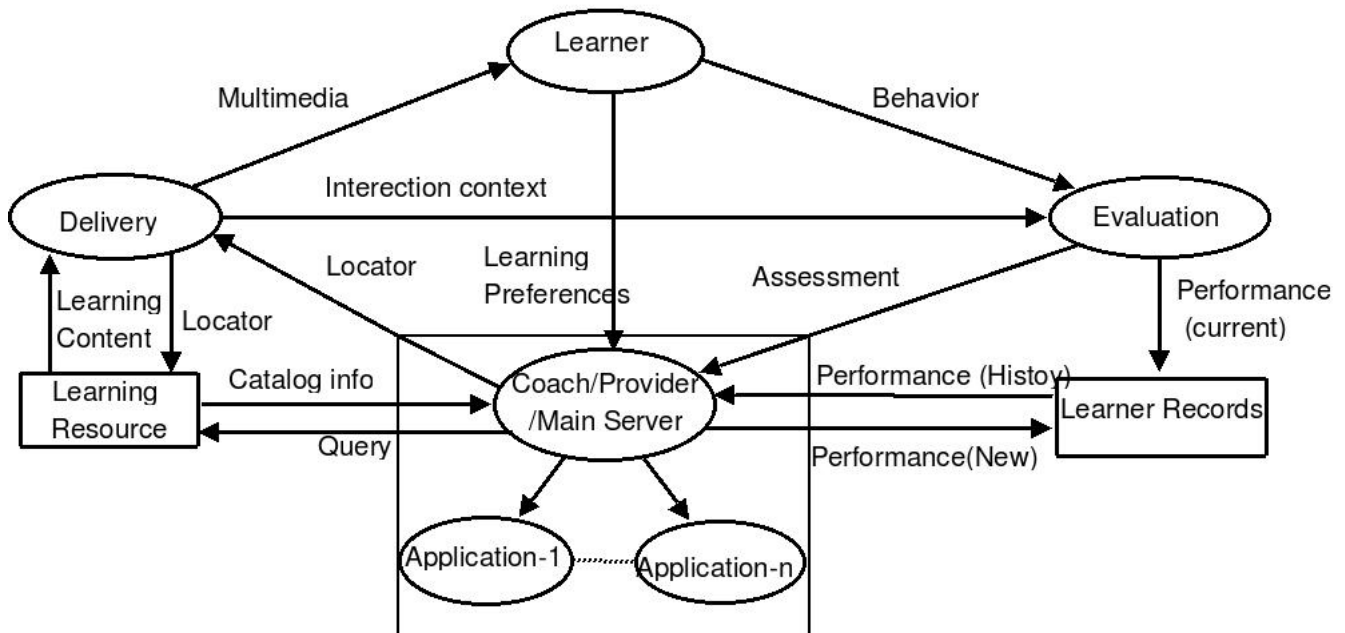


Figure 1: IEEE LTSA Client Server Architecture[6]



## 2.7 Scope of this project

This project has been done in the sixth semester of the Bachelor/Master of Computer Application (BCA/MCA) course of Tripura University. The period of work is roughly five months. Within this project we accomplish the following part of the system proposed above: 1. Carry out a detailed System Analysis of the land acquisition system. 2. Designing/Creation of relational tables in Oracle RDBMS. 3. Designing of data entry forms to enter and subsequently maintain the information pertaining to the land acquisition process. 4. Generation of various reports at different stages based on specific query by the user input.

## 2.8 System development approach

[Briefly list the stages of your project, such as - initial system study, feasibility analysis, detailed system analysis (use of DFD and ER diagram for describing the system), system design (database design, forms design), security model, system implementation (do not confuse implementation with deployment), system testing, system deployment (installing the system, user training, feedback), etc. DO NOT ELABORATE.]

### 2.8.1 Subsection here

Write some text here; types used are [6] (figure.2):

1. *The interaction context:* This flow of data gives the necessary information for interpretation of the observations.
2. *The observations:* This represents the real-time unabridged information concerning the learner activities.
3. *The acquisition state:* The evaluating process can send or update a learner profile (e.g. a response to a correct answer within a given time).

The role and the behavior of the different components are described using a learner scenario, which is divided into eight identified scenarios:

1. The teaching style, the pedagogical choices and the acquisition methods are negotiated with the learner.
2. The tutoring process extracts the pedagogical content from the proposed resources.

# Chapter 3

---

## Feasibility Analysis

---

Based on the architecture and the system development approach, write about the technical, economic and behavioral feasibility of the solution [2].

From the initial system study we can propose to build a system with the following general architecture.

[Include a skeleton architecture diagram]

[Requirements for System Deployment, i.e., hardware, software, computer networking facilities, power, manpower, floor space, etc. to install the system and run it for actual operation.]

[Requirements for System Development, i.e., hardware, software, networking, manpower, etc. to do the system development]

[Behavioural aspects of the proposed system, i.e., computer operation skills shall be required, changed roles of various persons, changed nature of certain operations, etc.]

[Justification of feasibility (or infeasibility) considering the above points. This may be broken up into Technical feasibility (required technology exists - either available in the organisation or can be acquired within economic feasibility), Economic feasibility, Behavioural feasibility, etc.]

[Conclusion - Final feasibility statement]

### 3.1 Section Name

Random text typed here as an example, write your own text here. 5 brings out the following inherent capabilities in the proposed extended model of IEEE LTSA:

- *Reusability*- Random text typed here as an example, write your own text here.
- *Interoperability*- Random text typed here as an example, write your own text here.
- *Loose Coupling*- Some text here.
- *Flexibility*- My report.
- *Capability of providing composite e-learning services*- Random text typed here as an example, write your own text here.



Figure 2: IEEE LTSA in SOA environment

some text here.

The proposed extended model of IEEE LTSA makes use of SOA architecture (Figure. 5). Random text typed here as an example, write your own text here.

# Chapter 4

---

## System Analysis

---

### 4.1 Introduction

Detailed description of the problem and its parameters. Available and expected interfaces that the proposed solution shall have to support, functional and performance expectations. If an information system is involved, include an ER diagram to depict the pieces of information that need to be handled and the relationships existing between them.

[Few lines about the methods you used to understand the problem, i.e., how you gather information about the problem - interviewing concerned persons, reading existing documents, using questionnaires, etc.]

[Describe the land acquisition process briefly. Such as -]

Briefly state the process of land acquisition process comprises the following steps:

1. The Geological department requests the Civil department to carry out a survey of a proposed site to know about its engineering suitability, the approximate cost of the land including its standing properties, the approximate cost for any construction work for mining, or for accessing the site, etc. This request is made in form LAF-1.
2. Senior personnel of the Civil department carries out a survey of the land. The results of this survey is summarised in LAF-2 in association with the Land department. LAF-2 is presented to the Geological department.

3. The Geological department issues LAF-3 to the Civil department, which is an agreement of the terms and conditions.
4. The Civil department prepares the land map, which is a sketch showing the geographical positioning of the location relative to surrounding areas and sites. This map is given to the Land department to initiate steps for acquisition.
5. The Land department approaches the circle officer, under whom the location falls, with the land map and based on that obtains an approximate list of land owners, within whose land boundaries, the proposed location happens to fall. This listing is called the Chitha Book. The Chitha Book specifies information like the Location/Project name, the village, mouza, district and circle under which the location falls, land details like the daag number, land class (Baari/Foring, Govt.Land, Jolduba, Salitoli, Tea/ Grant), land area, patta type (Annual/Periodic/ Tea Periodic/Tea Grant), the patta number and pattadar details like his name, his fathers'/husbands' name, his address etc.
6. A group comprising people from the survey department and the land department conducts a survey of the location to demarcate and determine exactly the individual occupiers at that location, and the exact area of land they are occupying. The Plot Measurement Records Book is then prepared giving the list of individual occupiers' names, the plot numbers of their plots, other information like their addresses, their fathers'/husbands' names, along with the land areas under their occupancy.
7. A special Assessment Group is formed with members from different departments like Planning, Accounts and Land. This group performs the survey of the plots and determines the properties and their total individual values based on a pre specified listing of all properties and their rates, called the Zirat Book. Finally the Zirat Compensation List is prepared that carries information regarding how much compensation needs to be paid to a particular plot occupier.
8. A Final Landchart, similar in format to the initial chitha book, is prepared which is a more accurate specification of the owners and the area of land owned by them at a particular location. After this phase the land value is determined based on a pre-specified listing of land types and their prices per bigha.
9. Negotiations are carried out with the occupiers or the pattadars (owners). This might fail because of some disagreement or dissatisfaction.
10. When Negotiations Succeed -
  - 10.1 the Sale/Purchase permission of the land is applied for. Then after the receipt of the sale/purchase permission the land value proposal is put up. On approval of this proposal the sale-deed is executed. The sale-deed (daleel) is a document that shows the purchase of the land

and is signed by the sub registrar from the district HQ.

10.2 All the monetary transactions are carried out under the supervision of the accounts management which gives approval to and releases the payment cheques. The Land Department keeps record of all such transactions corresponding to a particular location, both for the land owners as well as the occupiers. Such information comprises the amounts to be paid, the cheque number, bank name, cheque issues date, receipt number, the sale-deed number, the date on which the sale-deed was executed at all.

10.3 The mutation is applied for. The mutation is the actual transfer of land from the seller to the purchaser. This comprises the canceling of the name of the seller from the land records in the district office. This is the true acquiring of the ownership rights on the land purchased. But even before the mutation is applied for the mining on the site starts as to minimize the losses due to any delay.

11. When the normal negotiations fail and an agreement could not be reached, the Land department then applies to the Deputy Commissioner who then passes the Role 135/262. Under this role the Government does all the negotiations and irrespective of whether some agreement is reached or not, the land is acquired and given to XYZ Corp. After this the land department progresses with the usual tasks of applying for the sale/purchase permission, getting approval for the payments, applying and getting the mutation, etc.

## **4.2 Data flow diagram of the land acquisition process**

[Represent the above land acquisition process using a DFD. This DFD describes the actual process that exists. The DFD that models the new system that you are going to develop may be different than this, and that shall come in the design phase. So for the DFD at this stage - 1. The information inputs should correspond to the various forms (e.g. LAF's) in use, the recording of directly observed facts, the direct inputs provided by various persons and recorded by some designated official, etc.

2. The data repositories should correspond to the actual registers, or other data recording methods currently used in the process.

3. The outputs should correspond to the formal reports that are prepared in the existing system as well as the ad hoc information retrievals by different persons at different stages.

You should note that in this DFD, the personnel of the various departments should be shown in boxes since they either gives input information to the system or obtains information from the system. The actual data processing (viz., calculating figures, recording facts in registers, etc.)

performed by them should be shown in circles.

The DFD should be followed by a data dictionary, that unambiguously describes the format of each and every piece of information both in transit as well as in repository.]

### **4.3 Entity relationship diagram**

[The DFD does not reveal the relationship between the various data elements involved in the system. So state these relationships using an ER diagram. This is particularly important if your target system is going to employ a DBMS.]

### **4.4 Physical and behavioural aspects of the system**

[Mention the technical skills of the personnel that may be expected, the information security concerns, desired physical locations for users interactions with the system (this may reveal the need for a distributed and multi-user system).]

#### **4.4.1 Sub section here**

Random text typed here as an example, write your own text here. This is my project report with following features:

- Random text typed here as an example, write your own text here.
- The platform provides self learning environment with a list.
- Each course will have the option for both online assessment as well.
- A complete mechanism is integrated through the e-portfolios of individual learners.

#### **■ Sub Subsection here**

Random text typed here as an example, write your own text here.

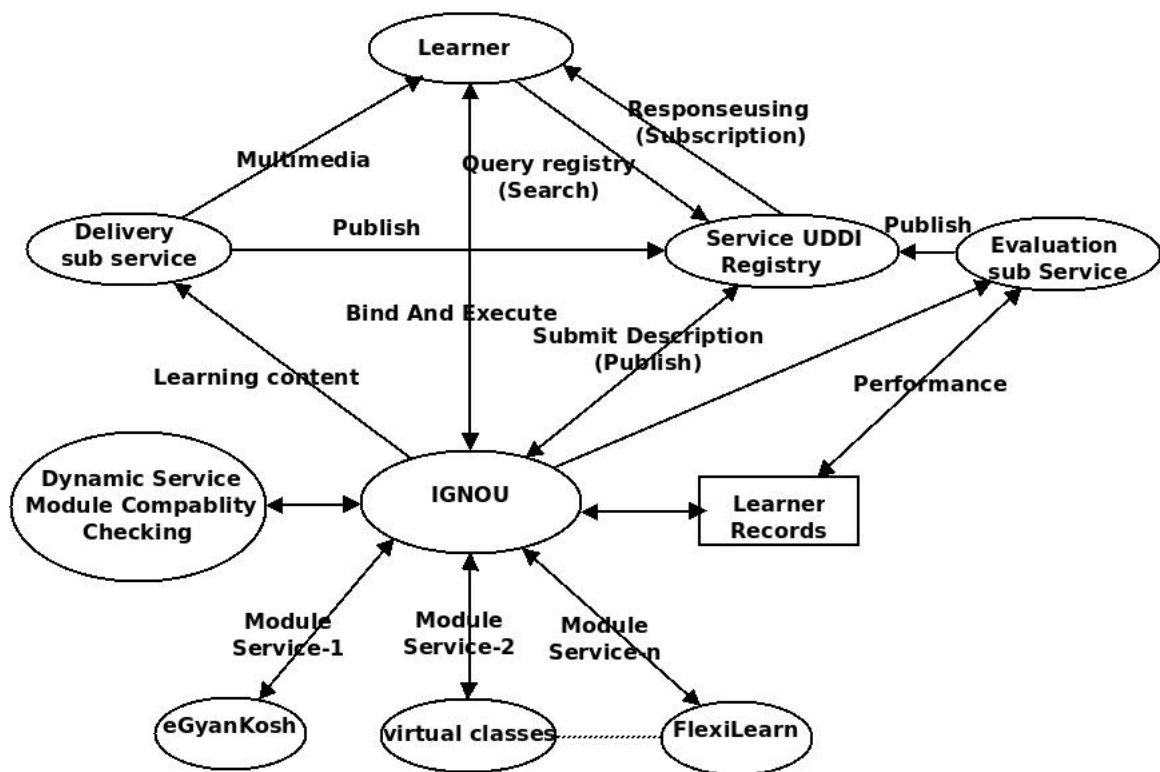


Figure 3: Give a caption to your image here



Lorem ipsum dolor sit amet, consectetur adipiscing elit. Etiam lobortis facilisis sem. Nullam nec mi et neque pharetra sollicitudin. Praesent imperdiet mi nec ante. Donec ullamcorper, felis non sodales commodo, lectus velit ultrices augue, a dignissim nibh lectus placerat pede. Vivamus nunc nunc, molestie ut, ultricies vel, semper in, velit. Ut porttitor. Praesent in sapien. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Duis fringilla tristique neque. Sed interdum libero ut metus. Pellentesque placerat. Nam rutrum augue a leo. Morbi sed elit sit amet ante lobortis sollicitudin. Praesent blandit blandit mauris. Praesent lectus tellus, aliquet aliquam, luctus a, egestas a, turpis. Mauris lacinia lorem sit amet ipsum. Nunc quis urna dictum turpis accumsan semper.

# Chapter 5

---

## Software Requirements Specifications

---

This is in fact a formal point wise enumeration of the expectations from the proposed solution. The point wise nature entails that the solution might be evaluated according to those points. The SRS is actually the result of the system analysis that is performed. While the system analysis describes the problem, the SRS defines the desired characteristics of the solution. The SRS may have the following sections and subsections (adopted from Pankaj Jalote's textbook on Software Engg.), and you may cite references to appropriate sections of the Systems Analysis chapter in the SRS sections. While some of the following sections may be omitted because you do not really have anything to put there, the ones marked '\*' should not be ignored.

### **5.1 General Description**

#### **5.1.1 Product Perspective**

Relationship of the system to other systems - defining if the system is independent or is a part of a larger system, and what are its principal interfaces. Multiple points of system interface (multiuser requirement) may be mentioned here.]

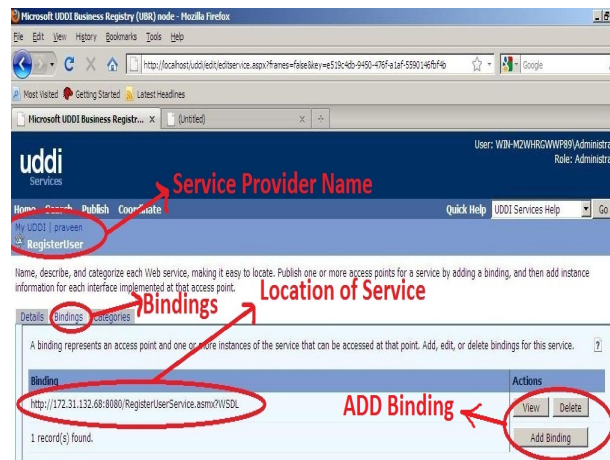


Figure 4: caption of image here

### 5.1.2 Product Functions

General high-level description (i.e., overview) of the functions to be performed by the system. Suitable diagrams may be used here.

### 5.1.3 User Characteristics

A statement about the characteristics of the end-user of the system - status, technical competence, etc.

### 5.1.4 General Constraints

Are there any factor that prevents one from designing and implementing a fanciful/ideal solution (system), viz., time, resource, technical expertise, etc.]

### 5.1.5 Assumptions and Dependencies

Primarily, operating conditions (power supply, load on the system, etc.) under which the system is supposed to function, end-user behaviour that is assumed, etc. One way for a new person who writes this section after actually implementing the system, to decide what to include in this section is to go through the implementation and identify places where some defensive checks could have been placed. If there is any such missing check, then an appropriate assumption can be included in this section to justify the omitting of the check. But note that not all such omissions can be justified by assumptions !

### **5.1.6 Functional Requirements**

Describe each functionality of the system one at a time. A functionality can be a information processing functionality involving some mathematical functions, a data input/output/transfer functionality, special processing functionality for system maintenance, etc. A data storage requirement can be expressed in terms of appropriate input and output functions.

### **5.1.7 Functional Requirement 1**

:  
:

5.1.n Functional Requirement n

## **5.2 External Interface Requirements**

### **5.2.1 User Interfaces**

Components of input forms, their break-ups into multiple stages, format and description of output/reports, etc.]

### **5.2.2 Hardware Interfaces**

Hardware that the client intends to deploy - computer classes, printer types, communicating devices, etc.

### **5.2.3 Software Interfaces**

If the system has to interact with other software then a description of the information exchange formats. For instance - data import from some existing DBMS, data export to some plotter or some report generation package to be used along with this system, etc.

## **5.3 Performance Requirements**

## **5.4 Design Constraints**

### **5.4.1 Standard Compliance**

Any official or de facto standards that are to be followed.

### **5.4.2 Hardware Constraints**

### **5.4.3 Other Requirements**

### **5.4.4 Scope of this project**

If the entire system development is not targeted in this project mention this here briefly.

- Registration Service
- Computer Programming Lectures service (Textual Narratives)
- Computer Programming Lectures service (Multimedia Narratives)
- Online Examination Service
- In the Access Point textbox, the URL of the services composed is typed. Update button is clicked for required updation *http : //computer\_name/Service1.asmx* In the URL, computer\_name is replaced with the name of the server that hosts the Web service. "*http : //localhost*" in the URL should not be used.

# Chapter 6

---

## System design

---

Describe the architecture you have earlier proposed, the system modules, the interfaces, the database schema, important algorithms, system maintenance recommendations/requirements, etc. Also briefly cover the alternatives that you considered before finalizing your design.

### **6.1 Introduction**

A brief overview of the design work. This includes the design methodology and approach that you have adopted (specify any technical name of the methodology, if such terms exist, such as object-oriented design, etc.

### **6.2 System Architecture**

You may refer to the architecture diagram you have included in the Feasibility Analysis chapter, if that architecture has been taken without modification. If during design phase, that architecture has been modified, then present a diagram here. This diagram should depict the hardware and software (high-level only) modularity of the system, the client-server identification of modules, and other such high level details. Give a brief textual description of the architecture. Keep in mind the system requirements and see that the architecture meets the requirements.

## 6.3 Module Design

[Assuming structured design] [The data flow that has been described in the System Analysis chapter may require changes for the purpose of design. Such as - 1. In a manual system (that was described in the DFD in the Analysis phase) there may be redundancy in inputs from the user - such as entry-date (in a computerised system date can be generated by the system), details of some entity which already exist in the system, etc. 2. Also, the new system may support more queries which in turn correspond to new input and output interfaces. 3. The modularity depicted in the DFD of analysis may be changed for design. So include Data Flow Diagrams that describe the system from the design perspective. There may be DFD in multiple levels (level 1, level 2, etc.) Give the data dictionary corresponding to the design DFD. The attributes of data elements should not conflict with those of the analysis DFD. For instance a data item that was described as a string of upto 30 alphabetic letters should not be described to be of some smaller size now. Give the process description of each module shown in the DFD. This description shows the functionality of a module.

## 6.4 Database Design

[Assuming that there will be some DBMS used] Describe the database schema you have designed. Cite references to the ER diagram given in the Analysis chapter. In some situations, the ER diagram may require modifications, especially if the new system is going to add new functionality involving new entities and relationships. In such case give the modified ER diagram before describing the relational schema. [Storage Capacity Requirements - Evaluate the storage requirements per record and derive approximate relationship between physical parameters (such as, single land acquisition deal) to storage requirements.]

## 6.5 Input Output Design

Describe the data input formats (Forms, etc.) and the report formats in terms of contents. The layout of these need not be specified in detail here. Sample forms and reports may be included in an appropriate Appendix.

## 6.6 Algorithm design

Describe the non-trivial algorithms that you have designed here. You may cite references to sources from where you have taken certain algorithms, and omit details of those. In this section you should also describe any significant data structures.] Follow the below format for writing algorithm.

---

**Alg. 1** Service Composition Method: A Sample

---

```

1   begin
2       Get service choice from user
3       Save choice into a variable 'var'
4       Call Login Service with a argument of saved variable (var)
5       Do Login (validation)
6       if user is valid then
7           check variable (var)
8           call service which refer to (var))
9           Get the result of service
10          Return result
11      else Return error to caller of Login Function
12  end

```

---

## 6.7 Electronic Data Communication Design

Networking considerations. You may indicate that you have used the inherent networking capabilities available in the platform you are going to use (such as Oracle over Novell Netware, TCP/IP support in Digital UNIX, etc.). If the existing provisions in the platforms are not adequate, then describe the communication model you are going to implement.

## 6.8 System Maintenance

System installation procedure, backup, system operation logs, trouble shooting provisions, etc.

---



## **6.9 Other Alternatives Considered**

Some other design possibilities that were considered and why those were not adopted. These alternatives may be regarding methodology, architecture, input, output, or algorithms.

# Chapter 7

---

## System Implementation

---

Describe the system set-up that is required for developing your solution, the components of your deliverables, the system set-up that is required to deploy the solution, installation procedure, user training requirements and status, testing of the system, trouble-shooting guidelines, guidelines for further work.

### **7.1 Hardware Components**

List the hardware units that have been selected for the system. Give little details such as - processor, clock frequency, memory, hard-disk, cartridge drive, multi-media components (only if your system uses them).

### **7.2 Software Environment**

Describe the software features over which your system shall run which OS, which DBMS, etc.

### **7.3 System Development Platform**

Describe the platform that have been used to develop the system. This includes, hardware units, programming environment (including choice of compilers), DBMS, software development tools (e.g., front-end tools), etc.

### **7.4 Project Accomplishment Status**

Briefly state how much of the targeted scope could be accomplished, what are some critical aspects, if any, that needs to be taken care of to complete any remaining part.

### **7.5 Guidelines for Continuation**

Any guidelines that you seem necessary for others who may continue the work so as to ensure smooth implementation.

### **7.6 Hardware Components**

text here

### **7.7 Software Environment**

Some text here

# Chapter 8

---

## System Testing

---

Random text typed here as an example, write your own text here. This is my project report.

### **8.1 Test Plan**

Overall plan for system testing - different types of testings planned to be done, notional schedule, and broad aspects to be covered under the testing.

### **8.2 Test Cases**

Details of individual tests to be carried out. This should specify system configuration for the test, inputs to be given, outputs expected and persons involved.

# Chapter 9

---

## Conclusion & Future Direction of Work

---

### **9.1 Conclusion**

Random text typed here as an example, write your own text here. This is my project report.

### **9.2 Future Direction of work**

Random text typed here as an example, write your own text here. This is my project report.

---

## References

---

- [1] S. Samaddar. Development of Metadata Model of Web Learning Using Semantic Web. In *4th International iPED Conference, iPED*, pages 77–79, 2009.
- [2] H. Lan, S. Ling-ge, Z. Chun-guang. Research on the Sharing E-Learning Based on SOA and Semantic Web Architecture. In *International Conference on Computer Science and Software Engineering*, volume: 6 pages 426–429, 2008.
- [3] D. Berardi. Automatic Service Composition. Models, Techniques and Tools. In *PhD thesis*, Universit'a di Roma La Sapienza, 2005.
- [4] R. Cardenas, E. Sanchez. Security Challenges of Distributed e-Learning Systems. In *Springer-Verlag, Berlin Heidelberg ISSU LNCS 3563*, pages 538–544, 2005.
- [5] T. Bultan, X. Fu, R. Hull, and J. Su. Conversation Specification: A New Approach to Design and Analysis of E-Service Composition. In *Proceedings of the 12th International World Wide Web Conference (WWW 2003)*, pages 403–410. ACM, 2003.
- [6] F. Farance, J. Tonkel. Draft Standard for Learning Technologies. Learning Technology Systems Architecture (LTSA). In *Technical report, IEEE LTSC (2001)*, [http : //ltsc.ieee.org/wg1/files/ltsa05.pdf](http://ltsc.ieee.org/wg1/files/ltsa05.pdf). Accessed on, February 10.
- [7] A.FOX AND S.D.GRIBBLE. Security on the move: Indirect authentication using Kerberos. In *In Proceedings of the 2nd Annual International Conference on Mobile Computing and Networking ACM, New York*, pages 155–163., November 1996.

- [8] FlexiLearn. *http : //www.ignouflexilearn.com.Last Accessed on, February 6 2010.*
- [9] Microsoft Support *http://support.microsoft.com/kb/939689.* Last accessed on april 20 2010.
- [10] UDDI Specification: *http://www.uddi.org.* Last accessed on january 23, 2010.
- [11] *http://seekda.com.* Last accessed on January 25 2010.

# Appendix *A*

---

## User Manual

---

Include user manual of your project here (if any). [Backup, operation log, trouble shooting.]

### **A.1 Installation Manual**

### **A.2 Reference Manual**

### **A.3 Maintenance Manual**



# Appendix *B*

---

## Test Report

---

This should correspond to the Test cases already enlisted. Here record the observations, record repetitions (due to unexpected test outcome and subsequent retry after any system correction)

# Appendix *C*

---

## Input Output Formats

---

### **C.1 Paper Forms used in the Organisation**

Attach copies of all existing paper input and output forms.

### **C.2 Input Forms in the New System**

Attach copies of all forms designed in this project.

### **C.3 Output Formats in the New System**

Attach copies of all output reports with test data.

# Appendix *D*

---

## Source Code

---

Include your project source code here