UNIVERSITY OF EDUCATION

Final Documentation Format Guidelines

Title Cover Specimen
Hard Bound
(After 3 Enter Spaces)

TYPE TITLE OF FINAL PROJECT HERE

(16 pt. Bold, Capital Letters, Single Space, Align Centre)
(After 5 enter Spaces)

(After 4 enter spaces)

Project ID- 00

Project Advisor: **Name of Project Adviser**

Submitted By

Name of Student	ID of Student
Name of Student	ID of Student

University of Education

Inner Title Cover Specimen
(After 3 enter spaces)

Type Your Project Title Here

(14 pt. Bold, Capitalized Each word, Align Centre)
(After 6 enter Spaces)

BS in Information Technology-20XX
MSc in Information Technology-20XX
(14 pt. Bold, Capitalized Each word, Align Centre)
(After 6 enter times)

A project submitted in partial fulfillment of the
requirements for the award of the degree of
BS in information Technology /
MSc in Information Technology
(After 11 enter times)

NAME OF DIVISION/CAMPUS

UNIVERSITY OF EDUCATION

LAHORE

November 2018

"I hereby declare that I have read this project documentation and in my opinion this project is sufficient in terms of scope and quality for the award of the degree of BS in Information Technology/MSc in Information Technology."

_____

Project Primary Supervisor
Name: Write name of Project advisor here
Designation: Write designation of Project Advisor here
University of Education.

_____

Project Examiner
Name: Write name of Project Examiner here
Designation: Write designation of Project Examiner here
University of Education.

DECLARATION

I declare that this project title entitled "**write your project title here**" is the result of my own research and development except as cited in the references. This project has not been accepted for any degree and is not concurrently submitted in candidate for any other degree. At any time if my statement is found to be incorrect even afterwards of BS in Information Technology/MSc in Information Technology, the university has the right to withdraw my BS in Information Technology/MSc in Information Technology degree.

Signature: _____

NAME IN CAPITAL LETTERS

Name: _____

Month date, year

Date: _____

Signature: _____

NAME IN CAPITAL LETTERS

Name: _____

Month date, year

Date: _____

Signature: _____

NAME IN CAPITAL LETTERS

Name: _____

Month date, year

Date: _____

Signature: _____

NAME IN CAPITAL LETTERS

Name: _____

Month date, year

Date: _____

PLAGIARISM UNDERTAKEN

I solemnly declare that project work presented in this documentation entitles **"Name of your project**" is solely my work with no significant contribution from any other person. Small contribution/help wherever taken has been acknowledged and that complete project has been written by me.

I understand that zero tolerance policy of the HEC and University of Education, Lahore towards plagiarism. Therefore, we as an author of the above titled project declare that no portion of my project documentation and any material used as reference is properly referred/ cited.

I undertake that of I am found guilty of any formal plagiarism in the above titled project even after award of BS/MSc degree, the University reserve the rights to withdraw/revoke my BS/MSc degree and that HEC and the University has the right to publish my name on the HEC/University Website on which names of students are place who submitted plagiarized projects.

Signature: _____ Signature: _____

NAME IN CAPITAL LETTERS NAME IN CAPITAL LETTERS

Name: _____ Name: _____

Month date, year Month date, year

Date: _____ Date: _____

Signature: _____ Signature: _____

NAME IN CAPITAL LETTERS NAME IN CAPITAL LETTERS

Name: _____ Name: _____

Month date, year Month date, year

Date: _____ Date: _____

CERTIFICATE OF APPROVAL

This is to certify that the project work presented in this documentation entitled, "**write name of your project"**, was conducted by **"name of member 1", "name of member 2", "name of member 3", "name of member 4"**, under the supervision of **"write your supervisor name"**. No part of this project has been submitted anywhere else for any degree. This project is submitted to the **"name of your campus, University of Education"** is partial fulfillment of the requirements of the degree of BS in Information Technology/MSc in Information Technology.

Signature: _____

NAME IN CAPITAL LETTERS

Name: _____

Month date, year

Date: _____

Signature: _____

NAME IN CAPITAL LETTERS

Name: _____

Month date, year

Date: _____

Signature: _____

NAME IN CAPITAL LETTERS

Name: _____

Month date, year

Date: _____

Signature: _____

NAME IN CAPITAL LETTERS

Name: _____

Month date, year

Date: _____

_____

Project Primary Supervisor
Name: Write name of Project advisor here
Designation: Write designation of Project Advisor here
University of Education.

_____

Project Examiner
Name: Write name of Project Examiner here
Designation: Write designation of Project Examiner here
University of Education.

OFFICE OF CONTROLLER OF EXAMINATION

NOTIFICATION

No: _____ Date: _____

It is notified for the nomination of all the concerned that Mr./Ms. (name of the student-1), (name of the student-2), (name of the student-1), (name of the student-1) BS/MSc student of Name of the department of University of Education has completed all the requirements for the award of BS/MSc Degree in the discipline of Information Technology as per detail given hereunder:

BS in Information Technology/
MSC in Information Technology

Cumulative Result

Credit Hours:_____

Registration No	**Complete Name**	**Course work**	**Project**	**Total**	**Cumulative Grade Point Average (CGPA)**

Project Title: _____

Name of Supervisor: _____

Signed by
Controller of Examination

CC:
1.abcd
2. xyz3

ACKNOWLEDGEMENT

We truly acknowledge the cooperation and help make by Name of **Acknowledger**, **Designation** of **Address of Organization**. He has been a constant source of guidance throughout the course of this project. We would also like to thank **Acknowledger** from **Designation**, **Address of Organization** for his help and guidance throughout this project. We are also thankful to our friends and families whose silent support led us to complete our project.

1- Mr. Furqan
2- Mr. Akram

Date:
March 11, 2016

ABSTRACT

A good abstract explains in a few lines what was actually done and why the work was important. The maximum number of words should not be more than 1000 words. The abstract page may include the following:

- Background
- Objectives/aim of the study
- Research methodologies
- Findings
- Conclusions
- Implications
- Limitations

DELIVERABLE SUBMISSION GUIDELINE

Name of Deliverable	Contents	Remarks
Deliverable-I	**Project Proposal** **Chapter-1:** Gathering & Analyzing Information **Chapter-2:** Software Requirement Specification (Sample Attached)	Deliverable-I, should be submit after the commencement of 7th Semester.
Deliverable-II	**Chapter-3:** Analysis **Chapter-4:** Design **Chapter-5:** Graphical User Interfaces **Chapter-6:** Testing **Chapter-7:** Conclusion and Future work **Complete Running Application**	Deliverable-II, should be submit after the commencement of 8th Semester.

TABLE OF CONTENTS

(Required Chapters of Project Documentation)

TITLE AND DESCRIPTION:

CHAPTER NO. 1: Gathering & Analyzing Information

CHAPTER NO. 2: Software Requirement Specification (Sample Attached)

CHAPTER 3: Analysis [Use Case Description and Use Case Model] (Sample Attached)

CHAPTER 4: Design [with Description of each diagram]

CHAPTER 5: Graphical User Interfaces

- (Mockups of working software application)

CHAPTER 6: Testing

- Introduction
- Test Scenario **(Sample Attached)**
- Test Plan
- Definition of Test Cases
- Test Cases Specifications
- Test Cases Results for:
    - Black Box Test Cases
    - White Box Test Cases.

CHAPTER 7: Conclusion and Future work

References (APA 6 Edition Style)
Appendix

Appendix: Final Documentation Format Guidelines

Typographical Format and Binding

Color of Project Documentation Binding

Name of the Degree Program	Text Color	Color of Binding
BS in Information Technology	**Black with Silver Script**	**ABC**
MSc in Information Technology	**Navy Blue with Gold Script**	**ABC**

Page Format:

Page size:	A4
Top margin:	1.00 inch
Bottom margin:	1.00 inch
Left margin:	1.5 inch
Right margin:	1.00 inch

Page numbering: Bottom right - part of the footnote
Title page not numbered
All other pages before the page of chapter one numbered in lower roman numerals (i, ii, iii, …)
All other pages starting from first page of chapter one to last page of the report numbered in integers (1, 2, 3, …)

Footer: Each page shall have a footnote "University of Education"
Left aligned
In case of long titles shorter versions should be used.
There shall be a line over the footnote.

Header: Each page shall have a header "Project Name"
Left aligned
In case of long titles shorter versions should be used.
There shall be a line under the footnote.

Chapter Startup: Each chapter shall be numbered as Chapter 1, Chapter 2, etc. The name of the chapter shall be written immediately below. Both shall be centered horizontally as well as vertically.
The actual chapter content shall start from the next page.

Text:	Only one side of the paper shall be used. The other side shall be blank. When a report is opened the right side would contain text, figures, or tables and the left side would be blank.
Tables and Figures:	Tables and figures shall be placed on one side only Separate pages shall be used for figures and tables. One page may contain more than one figure or table but text will not be combined or interlaced with figure or table. Each table / figure shall be numbered. For example, "Table 1.2: Population distribution in Asia" or "Figure 3.2: Temperature distribution" The table number or figure number shall be placed as normal text centered at the bottom of the table or figure or sideways with table / figure title coming on the opening side of the paper and note on the binding side.

Paragraph:

Single-spaced.
Line entered paragraph.
DONOT put indents at the beginning of the paragraph.
Left aligned or justified.

Text Format

Normal and plane text:

Font Type:	Times New Roman
Font Size:	12

Headings:

Chapter Heading:	Times New Roman Bold Size 16 Title Case normal
Heading 1:	Times New Roman Bold Size 14 Title Case normal
Heading 2:	Times New Roman Bold Size 12 Title Case normal
Heading 3:	Times New Roman Bold Size 12 Title Case italic

Sections and Subsections

In case of sections and subsections follow this format:

1 Section
1.1 Sub Section
1.1.1 Nested Sub Section
a
b
i
ii

The subsequent reference to a any section shall be made using the section and its number. For example, **section 2.1.3** means chapter 2 section 1 subsection 3.

Mathematical Equations

The following numbering scheme should be used to number the equations:

$$f(x) = x+3 \qquad (XX:YY)$$

Where XX is the chapter number and YY is the sequence number of that equation in that chapter.

If an equation is previously quoted in an earlier chapter, say as equation 4:5 and need to be re-quoted in chapter 5, its number will remain as equation 4:5.

References

References are to be placed in square brackets and interlaced in the text. For example, "A comprehensive detail of how to prevent accidents and losses caused by technology can be found in the literature [1]. A project report / thesis cannot be accepted without proper references. The references shall be quoted in the following format:

The articles from journals, books, and magazines are written as:

[1] Abe, M., S. Nakamura, K. Shikano, and H. Kuwabara. Voice conversion through vector quantization. *Journal of the Acoustical Society of Japan*, April 1990, E-11 pp 71-76.

[2] Hermansky, H. Perceptual linear predictive (PLP) analysis for speech. *Journal of the Acoustical Society of America*, January 1990, pp 1738-1752.

The books are written as:

[1] Nancy G. Leveson, Safeware System Safety and Computers, A guide to preventing accidents and losses caused by technology, Addison-Wesley Publishing Company, Inc. America, 1995.

[2] Richard R. Brooks, S. S. Iyengar, *Multi-Sensor Fusion Fundamentals and Applications with Software*, The Prentice-Hall Inc. London, 1998.

The Internet links shall be complete URLs to the final article.

[1] http://www.ue.edu.pk

For Softcopy Submission

Contents:

All reports / theses must accompany a CD whose contents will have the following:

Top-level directories:

Doc	All documents related to the project
	Instructions how to access the software to the point to running the project

All reports already submitted
The final project report in thesis form
Installation instructions
Trouble shooting instructions in case of problems
User manual
Research material including URLs
Papers consulted / referred to
Slides of the presentations

Source — All source files that will be needed to compile the project.
Further subdirectories can be used.
This must include sample data files as well.

Project — The running project including sample data files as well as sample output.
This should be in a form that if copied to a machine runs without errors.
This may an exe file of an entire project, an installer depending on the project or simply a running project.

You can have sub directories with appropriate names.

Length

The length of your dissertation depends on the type of project you have selected. An excellent dissertation will often be brief but effective (its author will have said a lot in a small amount of space). Voluminous data can be submitted electronically on CD.

Sample for Software Requirement Specification

.

Academic Automation System
(Specimen case study)

Software Requirements Specifications

Functional Requirements

No	Requirement	Description
FR1	Create Semester	The Academic Manager can create a new semester for offering. The semester is automatically offered to students when the Semester Registration Start Date is reached. The following information will be needed: • Year • Type (Spring, Summer, Fall) • Semester Start Date • Semester End Date • Semester Registration Start Date • Semester Registration End Date • Course Registration Start Date • Add Course Last Date • Drop Course Last Date • Withdraw Course Last Date • Classes Start Date • Classes End Date
FR2	Offer Course	The Academic Manager can offer a previously created course in the semester. The information provided will be: • Course (Title + Code) • CGPA Requirement • Registration Type (Primary Sections/Open) Depends on FR1.
FR3	Create Section	**Sections have to be created when a course is offered to students. The Academic Course Coordinator enters the following information must be provided:** • Instructor • Registration Last Date • Add Last Date • Drop Last Date

		• Withdraw Last Date • Class Timings • Registration Type (Batch-wise/Open) • Seats Distribution (if Batch-wise registration) Depends on FR1 and FR2.
FR4	Semester Registration Request	The student can register in the current semester. This includes a transaction equal to the Registration Fees in his account. A student can register in one semester at a time.
FR5	Add Student to Course	When a student's requests to add a course, the system will check the number courses that the student is already registered in and student's GPA against the requirement of the course. For BS and MS, maximum limit of courses in a semester is 5. The system will then check for clashes between the registered courses and the new course. If a student wants to take 6 courses, the advisor will have to approve this. A student with CGPA below 2 also needs approval from the advisor. The advisor 's approval should be received within 2 days of the registration, if registration does not close within those days. Both BS and MS students must have successfully cleared all pre-requisites of the courses that he/she is taking. The student must have cleared all previous dues to register for the new semester. The system will check the number of seats available. BS students can take MS courses and vice versa, if they are offered to them. However, BS students require the course instructor's approval for taking a MS course. MS students require the approval of their advisor/coordinator for taking any course. If all checks are validated the students is registered in the course.

		If the advisor's approval is required, then the student has 2 days for getting the approval (if the last date of registration is not in those 2 days) and a further 2 days (if the last date of registration is not in those 2 days) to submit his fees and get his name finally registered, else his name will be automatically removed. If seats are filled he/she is added to the waiting queue. The student can be added in 3 courses for the waiting list at a time.
FR6	Drop Course	The student can request to drop from any course he is registered in until the add/drop date. If there are students in the waiting list for the course, the next student is notified automatically. The students of the batch to who this course was offered are given priority. The new student has 2 days to confirm this registration by paying his dues, else his name is dropped from the waiting list, the list is updated and the next person is notified. Students with CGPA below 2 cannot drop a course without approval from the advisor. Depends on FR7.
FR7	Withdraw Course	The student can request to withdraw from any course he is registered in until the withdraw date. The status is changed to 'W' (withdraw) to appear on the transcript. Students with CGPA below 2 cannot withdraw from a course without approval from the advisor. MS students cannot withdraw from a course. Depends on FR7.
FR8	View reports	The various types of reports that the users (depending on their access level and role) can view are: • Course-wise Registration (specifying sections)

		• Student-wise Registration (specifying sections) • Waiting List of that Course (specifying sections) • Date-wise Add/Drop status of each student – This report will be delivered after the rest of the system, by 15th January 2002.
FR9	Semester Freeze	A student can freeze his next or previous semester by paying the required amount to Accounts. The fee has to be paid for each semester (maximum 2) that is to be frozen. The current semester cannot be frozen if a student is taking courses.
FR10	Clear Accounts Status	The Accounts Officer can clear the status of a student when he pays his dues. When the student pays his dues or submits the financial aid/installments application, the Accounts Officer clears his financial status so that the student's seat can be confirmed. When the student pays his semester freeze dues the Accounts Officer does the same.

Non-Functional Requirements

No	Requirement	Description
NFR1	Security	• All access to the system will be logged. • Only an administrator shall be able to create users. • Only authorized and authenticated users shall be able to access the system i.e. a user with valid username and password and the right post/domain. • System operators shall not have access to the data that they do not need • Database shall be accessed indirectly using predefined queries so that there is no direct SQL injection attack i.e. the user information that may affect the queries generated for the system or corrupt database • Illegal operations may lead to termination of program. Error handling and exceptions will stop any illegal operations.

NFR2	User Interface	Internet explorer 6.0+ will work as the client application on Windows.
NFR3	Platform Independence	The system will be independent of a single platform and commercial software.
NFR4	Extensibility	The system will be extensible and modular to integrate with other automated systems as they are developed
NFR5	Performance	The system will be able to handle multiple requests over the Intranet of 50 users at the maximum. When the applicant submits his information, the maximum delay before getting a response shall not exceed 3 minutes The availability of the application form shall be 24 hours a day during the dates it is uploaded on the site. The response time experienced by the administrator while editing or uploading the application form shall not be more than 30 seconds. Accuracy of up to 4 decimal places shall be provided while generating reports The software shall produce reports on the data saved in the database. Therefore, the software has the capacity to generate reports of any size that is within the database limits. After a training of 1 hour of an experienced computer user, the average number of mistakes made by any system operator shall not exceed 1 per day
NFR6	User Documentation	Online help shall be made available for: a) The applicants to help them in following the application procedure. b) The candidates giving the test to guide them through the instructions at the start of the test. • Reference manual shall be provided for all system operators defining user interfaces and functionalities provided by each interface to assist them in making use of the functionalities provided. • Installation manual shall be provided to the system users. • Recovery manual shall also be provided to assist them in case of system failures.

Use Case & Test Case Sample

USE CASE SCENARIO SAMPLE

UC Number: 1.1

UC Name: Login

Functional Requirement No: FR1

Primary Actors/Stakeholders: Student, Teacher

Secondary Actors/Stakeholders: Admin

Description: To get admin authentication and logged, the users will be prompted to login with their account information before they can use the system.

Preconditions: The user must have valid account.

Main Success Scenario (MSS):

1. The user connects to the system.
2. The user enters his/her username and password.
3. The system validates the username and password.
4. The system determines the user's role.
5. The system displays a list of actions the user can perform based on the user's role.

Alternative Scenario:

1. Invalid account user or pass
2. User already logged into the system

Post conditions:

1. The admin will log in to the system
2. The admin has access to the functions of the system

Extensions:

1. The system determines that the password is incorrect for the username entered.
    a. The system prompts the user to re-enter the password.
        i. The system determines that the re-entered password is incorrect.
        ii. The system provides the option for the user to retrieve a forgotten password.

2. The system determines that the username does not match a username for any account.
    a. the system displays an error message.
3. The system determines that the user has no role assigned in the system.
    a. The system does not allow the user to access the system.

TEST CASE SCENARIO SAMPLE

Test Case ID : 01

Test Case Name: Login

Test Priority: Medium/ High/ Low

Preconditions: The user must have valid account.

Post conditions:

1. The user will log in to the system
2. The user will have access to the functions of the system

SN	Action	Inputs	Expected Outcome	Actual Output	Test Application	Test result	Test comments
1	Launch Application	http://lms.ue.edu.pk	LMS home page	LMS home page	Internet Explorer-15	PASS	[Ali 10/0/2018]: Launch Successful
2	Enter correct email and password	Email ID: test@ue.edu.pk Password: ****	Login Success	Login Success	Internet Explorer-15	PASS	[Ayesha 10/0/2018]: Launch Successful