United College

Project I guidelines – 2024

BCA, Fourth Semester

Course Title: Project I
Course Code: CACS256
Credit Hours: 2 Year/Sem.: II/IV
Class Load: 4 Hrs./Week (Practical: 4Hrs.)
FM: 100/
PM: 40

Compiled by
Research & Extension Committee
United College
Kumaripati, Lalitpur, Nepal

December 2024

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Outlines

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Course description

This is fully practical course and expects the practical implementation of the concept learnt by students during first two years of their study. However, it should not be limited to the boundary of syllabus. So, the students can go beyond this and make their project work more realistic and technically sophisticated.

Course objective

The general objectives of this project work are to make student able in implementing concepts learnt by fourth semester so that they will be able to develop applications of their own choice. The specific objectives are to make students able to

- lead a software project development
- work in team
- use CASE tools
- write programs and improve programming skill
- write test cases for software testing and improve QA skill
- improve problem solving skill
- improve report writing skill
- improve presentation skill

Thematic details

Phases of project

Phases of Project: The students should work individually or in pairs (two people) on minor project of their choice, mostly related to the development of a computer application for a real life situation. The following are the three phases which students have to go through;

Proposal Submission and Defense	Students must submit and present project proposal within 20 days from their first class day of the fourth semester.
Mid-Term Defense	Students must submit progress report and defend midterm progress of their project work in the 12th week of the fourth semester.
Final Submission and Defense	Students must submit and orally defend the project work during last week of the fourth semester, before final board examination. Students must have to submit the project final report to their respective department before 10 days of final defense date. The report should be submitted in standard format as prescribed. The report should be made available to the external expert before a week of presentation date. The final presentation will be followed by the demonstration session, where students have to illustrate/simulate the project. A viva voice will be conducted by evaluation committee.

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Nature of project

Students should write programs to build some applications/system. Students should be encouraged to develop desktop based, web based, or mobile based applications using the language technologies of their expertise and comfort. The students can rely on the appropriate language technologies that they have learnt till 4th semester; however, it is not limited. Students can develop the applications containing CRUD operations or any other sophisticated algorithms, if applicable. Students should use appropriate CASE Tools. Students may work on projects like Information Systems, E-Commerce Portals, Game Applications, etc. While implementing the project, students should be encouraged to write their own modules rather than relying on APIs or Plugins (except in some unavoidable circumstances).

Focus of the study

Each student in a group should have equal participation in every phase of the project. The students should focus on the following different software development phases during the development of their project work;

1. Problem Identification
2. System Analysis
   a. Feasibility Study
   b. System Requirement Specification (SRS)
3. System Design
   a. Architecture Design
   b. Interface Design
   c. Database/Procedure/Algorithm Design
4. Implementing and Testing

Provision of supervision

There should be a regular faculty assigned as a supervisor. The role of supervisor is to guide the students throughout the project and provide constructive suggestions. The supervisor should also evaluate the project as part of evaluation committee.

Evaluation scheme

Phase-1	**Proposal submission and defense**	10%. of total marks is based on project proposal and presentation. *The 10 marks (first stage of evaluation) will be evaluated by the research committee formed by HOD/Coordinator as a part of proposal defense.*
Phase-2	**Work done and**	70% of total marks is based on;

	documentation	1. Work done 50% ▪ System analysis and design ▪ Implementation ▪ Understanding of methods used in project ▪ Ability to work with others ▪ Ability to identify problems ▪ Amount of work performed o 2. Documentation 20% ▪ Report organization ▪ Writing style ▪ Completeness of report ▪ Readability ▪ Organization and analysis of data and results *The 70 marks (second stage of evaluation) will be evaluated by the supervisor and internal examiner as a part of midterm defense and final defense. Out of the 70 marks, the supervisor will evaluate for 50 marks and internal examiner will evaluate for 20 marks.*
Phase-3	**Viva-voice**	20% of total marks is based on presentation and project demonstration and viva-voice. Each group member should present about the project followed by the demonstration of project developed. *The remaining 20 marks (third stage of evaluation) will be evaluated by the external examiner from the university.*

Out of 100 marks, the 80 marks (First stage evaluation + Second Stage Evaluation) will be considered as internal assessment while the 20 marks (Third Stage Evaluation) will be considered as external assessment. Individual student in the project should get passed in each of the internal and external assessments separately. Any student failing to pass each of the assessments will be counted as fail

Evaluation committee

- Project Supervisor
- HOD/Coordinator
- Internal Examiner (Regular Faculty)
- External Examiner

Evaluation committee

- Presentation Skills
- Viva/Question Answer
- Project Demonstration
- Project Report
- Level of Work
- Teamwork and Contribution

Final report submission

- Number of copies: 3 (College library + Self + Dean office)
- Cover page: Golden embracing with black binding
- A final approved signed copy of the report should be submitted to the Dean Office, Exam Section, FOHSS.

Technical guidelines

S/N	Particular	Descriptions			
1	**Chapter heading**	Font: Times New Roman		Size: 16	Align: Center
2	**Sub-heading**	Font: Times New Roman		Size: 14	Align: Left
3	**Body part**	Font: Times New Roman		Size: 12	Align: Justification
4	**Margin**	Left: 1.5	Right: 1	Top: 1	Bottom:1
5	**Spacing:**	1.5			
6	**Alignment**	Justification			
7	**Page number**	Font: Roman numeral for preliminary Arabic number for main body		Size: 12	Align: Lower center of the page

Plagiarism policy

The case study report submitted by students must not exceed 10% plagiarism, as determined by the college's plagiarism detection tool, iThenticate. If the report exceeds this threshold, the student will be notified and required to revise and correct the plagiarized sections before resubmitting. If, after revisions, the report still contains more than 10% plagiarism, it will be rejected. This policy is designed to maintain academic integrity and ensure the originality of the students' work. Proper citation and referencing of all sources are mandatory to avoid plagiarism. Students are encouraged to conduct thorough research, paraphrase effectively, and properly attribute ideas, data, and information from external sources to uphold the highest standards of academic honesty throughout the trend analysis report writing process.

Outlines of project proposal

Title page
Table of contents
1. Introduction
2. Problem statement
3. Objectives
4. Methodology

4.1 Requirement identification
- 4.1.1 Study of existing system
- 4.1.2 Requirement collection

4.2 Feasibility study
- 4.2.1 Technical
- 4.2.2 Operational
- 4.2.3 Economic

4.3 High level design of system (system flow chart/ methodology of the proposed system/ working mechanism of proposed system)

5. Gantt chart (showing the project timeline)
6. Expected outcome
7. References

Outlines of project report

Cover page
Title page
declaration
Supervisor's certificate
Internal and external examiners' approval
Abstract page
Acknowledgement
Table of contents
List of figures
List of tables
List of abbreviations

Chapter 1: INTRODUCTION
1.1 Introduction
1.2 Problem statement
1.3 Objectives
1.4 Scope and limitation
1.5 Report organization

Chapter 2: BACKGROUND STUDY AND LITERATURE REVIEW

2.1 Background Study (Description of fundamental theories, general concepts and terminologies related to the project)

2.2 Literature Review (Review of the similar projects, theories done by other researchers)

Chapter 3: SYSTEM ANALYSIS AND DESIGN

3.1 System Analysis

- 3.1.1 Requirement Analysis
  - 3.1.1.1 Functional Requirements (Illustrated using use case diagram/list)
  - 3.1.1.2 Non Functional Requirements
- 3.1.2 Feasibility Analysis
  - 3.1.2.1 Technical
  - 3.1.2.2 Operational
  - 3.1.2.3 Economic
  - 3.1.2.4 Schedule
- 3.1.3 Data Modelling (ER-Diagram)
- 3.1.4 Process Modelling (DFD)

3.2 System Design

- 3.2.1 Architectural Design
- 3.2.2 Database Schema Design
- 3.2.3 Interface Design (UI Interface / Interface Structure Diagrams)
- 3.2.4 Physical DFD

Chapter 4: IMPLEMENTATION AND TESTING

4.1 Implementation

- 4.1.1 Tools Used (CASE tools, Programming languages, Database platforms)
- 4.1.2 Implementation Details of Modules (Description of procedures/functions)

4.2 Testing

- 4.2.1 Test Cases for Unit Testing
- 4.2.2 Test Cases for System Testing

Chapter 5: CONCLUSION AND FUTURE RECOMMENDATIONS

5.1 Lesson learnt / Outcome

5.2 Conclusion

5.3 Future recommendations

REFERENCES

IEEE Standard

APPENDICES

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Annex 1: Cover page

Tribhuvan University

Faculty of Humanities and Social Sciences

TITLE OF PROJECT REPORT

A PROJECT REPORT

Submitted to

Department of Computer Application

United College,

Kumaripati, Lalitpur

In partial fulfillment of the requirement for the Bachelors of Computer Application

Submitted by

<Full Name>

Exam Roll No.:……..

TU Regd. No:……

Month, Year

Under the Supervision of

<Supervisor Name>

United College

Annex 2: Title page

Tribhuvan University

Faculty of Humanities and Social Sciences

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Exam Roll No.:……..

TU Regd. No:……

Month, Year

Under the Supervision of

<Supervisor Name>

United College

Annex – 3: Student's self-declaration

Declaration

I hereby declare that the Project I titled "<title of project>" submitted by me to the Faculty of Humanities and Social Sciences, in partial fulfillment of the requirements for the Bachelor of Computer Applications (BCA) degree, is an authentic record of my own work carried out under the supervision of <Supervisor's Name>. This report has not been submitted previously, either in part or in full, for the award of a degree or any other similar academic qualification in any other institution or university. I affirm that all the information, data, and findings presented in this report are true to the best of my knowledge and belief.

<Name of student>

Date:

United College

Annex – 4: Supervisor's recommendation

Tribhuvan University

Faculty of Humanities and Social Sciences

United College

Supervisor's Recommendation

I hereby recommend that this project prepared under my supervision by <name of student> entitled <Title of the project> in the partial fulfillment of the requirements for the degree of Bachelor of Computer Application (BCA) is recommended for the final evaluation.

……

<Name of Supervisor>

Supervisor

United College

Kumaripati, Lalitpur

United College

Annex – 5: Letter of approval

Tribhuvan University

Faculty of Humanities and Social Sciences

United College

LETTER OF APPROVAL

This is to certify that this project prepared by <name of the student> entitled "<Title of project>" in partial fulfillment of the requirements for the degree of Bachelor in Computer Application has been evaluated. In our opinion it is satisfactory in the scope and quality as a project for the required degree.

…… <Name of supervisor> Supervisor United college	…… <Name of HOD> Graduate Program director United college
…… <Name of internal examiner> Internal Examiner	…… <Name of external examiner> External Examiner

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Annex – 5: Table of contents

Table of contents

Closing note:

While preparing the project I, students must work closely with their concerned supervisor, who is responsible for guiding them throughout the process. Supervisor should ensure that the project follows the prescribed guidelines regarding structure, content, and formatting. Adherence to this guideline is crucial for maintaining the quality and consistency of the project, ensuring it aligns with academic and institutional requirements. This collaborative approach helps students present their work effectively and meet the expected academic standards.

Dr. Binod Lingden
Research Coordinator
United College
Kumaripati, Lalitpur