Department of Computer Science & Engineering
Chitkara University Institute of Engineering & Technology
(Accredited by NAAC with Grade 'A+')

Ref No: CUIET/CSE/ACAD/2025/98 Date: 25.02.2025

NOTICE

ATTENTION: - BE CSE Batch 2023

BE CSE 4th Semester- 23CS006: Backend Engineering-I Project Evaluation

Dear Students,

Please find below the updated rubrics and report format for the Backend Engineering-I (23CS006) project as per updated syllabus.

1.	Rubrics for the project based evaluation-I	-Appendix A
2.	Rubrics for the project based evaluation-II	-Appendix B
3.	Rubrics for the project based evaluation-III	-Appendix C
4.	Rubrics for the final project based evaluation	-Appendix D
5.	Front page of the project report.	-Appendix E
6.	Guidelines for the project report.	-Appendix F

Note:

- For Project Evaluation I, students (in teams) are required to develop integration between frontend and backend technologies by designing a workflow for data collection, transmission, and storage. This evaluation will involve creating a registration form on the frontend to capture user-entered data and implementing backend engineering to transmit and save this data to a server.
- For Project based Evaluation II and Project based Evaluation III, students (in teams) will enhance the project by incorporating additional functionality aligned with the concepts of Backend Engineering-I.
- Subsequently, the same project will be extended further by integrating more advanced features as part of the Final Project based Evaluation.
- Project team may consist at most 4 members. Only one (per team) spiral bind hard copy of Project report is required at the time of final project based evaluation.
- In case student is absent in any project evaluation, he/she will be given zero in the lab evaluation marks (under all rubrics).

-Sd-

Dr. Rishu Chhabra: Dean (CSE)

Dr. Vikas Khullar: Dean (CSE)

Appendix A

Rubrics for Project Evaluation-I

Back End Engineering-I (23CS006)

Evaluation Components	Details	Marks
1	Presentation	3
2	Implementation and Viva	7
	Total	**10**

Rubrics for Evaluation Component 1: Presentation

Criteria	Recommended Scores		
	Excellent (3)	**Good (2)**	**Satisfactory (1)**
Understanding and Communication	**(1)** Demonstrates thorough understanding of the Front End/Back End Integration. Effectively communicates key points and main ideas.	**(1)** Demonstrates basic understanding of the Front End/Back End Integration. Communicates key points but may miss some details.	**(0.5)** Demonstrates limited understanding of the Front End/Back End Integration. Struggles to communicate key points.
Clarity and Organization	**(1)** Presentation is clear, well-structured, and logically organized. Effectively uses visual aids to enhance understanding.	**(0.5)** Presentation is somewhat clear but may lack some structure and organization. Uses visual aids, but not effectively.	**(0.25)** Presentation is unclear and poorly organized. Visual aids are missing or ineffective.
Engagement and Enthusiasm	**(1)** Shows high level of engagement and enthusiasm throughout the presentation. Captivates the audience and maintains interest.	**(0.5)** Shows some engagement and enthusiasm. Able to maintain audience interest to a certain extent.	**(0.25)** Lacks engagement and enthusiasm. Fails to captivate or maintain audience interest.

Rubrics for Evaluation Component 2: Implementation and Viva

Criteria	Recommended Scores		
	Excellent (5-7)	**Good (2-4)**	**Satisfactory (0-2)**
Understanding Client-Server Architecture	**(2-3)** A clear understanding of client-server architecture, effectively explaining how requests are handled on the server.	**(1-2)** Basic understanding of the client-server model with minor inaccuracies in explaining request handling.	**(0-1)** Poor understanding of request handling, endpoints, and modules. Frequent errors in file streaming and exception handling.
Integration/Implementation of Front End/ Back End Engineering Concepts	**(3-4)** Demonstrate an excellent command on integration of Front End with Back End Engineering concepts.	**(1-2)** less understanding and command on integration of Front End with Back End Engineering concepts.	**(0-1)** Demonstrates poor understanding and command on integration of Front End with Back End Engineering concepts.

Appendix-B

Rubrics for Project Based Evaluation-II

Back End Engineering-I (23CS006)

Evaluation Components	Details	Marks
1	Presentation	3
2	Creativity and Innovation	2
3	Project Work and Viva	15
	Total	**20**

Rubrics for Evaluation Component 1: Presentation

Criteria	Recommended Scores		
	Excellent (3)	**Good (2)**	**Satisfactory (1)**
Understanding and Communication	**(1)** Demonstrates thorough understanding of the project. Effectively communicates key points and main ideas.	**(1)** Demonstrates basic understanding of the project. Communicates key points but may miss some details.	**(0.5)** Demonstrates limited understanding of the project. Struggles to communicate key points.
Clarity and Organization	**(1)** Presentation is clear, well-structured, and logically organized. Effectively uses visual aids to enhance understanding.	**(0.5)** Presentation is somewhat clear but may lack some structure and organization. Uses visual aids, but not effectively.	**(0.25)** Presentation is unclear and poorly organized. Visual aids are missing or ineffective.
Engagement and Enthusiasm	**(1)** Shows high level of engagement and enthusiasm throughout the presentation. Captivates the audience and maintains interest.	**(0.5)** Shows some engagement and enthusiasm. Able to maintain audience interest to a certain extent.	**(0.25)** Lacks engagement and enthusiasm. Fails to captivate or maintain audience interest.

Rubrics for Evaluation Component 2: Creativity and Innovation

Criteria	Recommended Scores
Creativity and Innovation	Excellent - 2 marks
	Good - 1 marks
	Not Good - 0 marks

Rubrics for Evaluation Component 3: Project Work and Viva

Criteria	Recommended Scores		
	Excellent (12-15)	**Good (7-11)**	**Satisfactory (0-6)**
Handling Requests & Creating Endpoints	**(4-5)** Effectively handles requests and creates well-defined endpoints; accurate use of parameters and handlers.	**(2.5-4)** Adequate handling with some errors in endpoint creation and parameter usage.	**(0-2)** Poor handling of requests; endpoints incorrectly defined.
Modules, npm, Static Pages & Exception Handling	**(3-4)** Comprehensive understanding and correct use of modules, npm	**(2.5-3)** Moderate understanding with minor mistakes in module use,	**(0-2)** Significant errors in module use, imports, or inability to manage static

	packages, and imports; successfully serves static files, handles file streams, and manages exceptions without errors.	imports, file streaming, or exception handling.	files and exceptions correctly.
Frameworks and Express Introduction	**(3.5-4)** In-depth knowledge of Node.js frameworks; excellent introduction to Express with practical applications; accurate implementation of routing methods, paths, parameters, and handlers.	**(1-2)** Adequate knowledge with some inaccuracies in frameworks or routing.	**(0-1)** Limited understanding of frameworks, Express basics, or routing implementation.
Middleware in Express	**(1.5-2)** Thorough explanation and accurate implementation of middleware lifecycle, application-level, and router-level middleware.	**(1-2)** Moderate understanding; occasional mistakes.	**(0-1)** Poor understanding; frequent errors in middleware handling.

Note: -

- Project team must continue the project evaluated in Project Based Evaluation-I and will add functionality accordingly.
- In case student is absent in any lab evaluation, he/she will be given zero in the lab evaluation marks (under all rubrics).

Appendix-C

Rubrics for Project Based Evaluation-III

Back End Engineering-I (23CS006)

Evaluation Components	Details	Marks
1	Presentation	3
2	Creativity and Innovation	2
3	Project Work and Viva	15
	Total	**20**

Rubrics for Evaluation Component 1: Presentation

Criteria	Recommended Scores		
	Excellent (3)	**Good (2)**	**Satisfactory (1)**
Understanding and Communication	**(1)** Demonstrates thorough understanding of the project. Effectively communicates key points and main ideas.	**(1)** Demonstrates basic understanding of the project. Communicates key points but may miss some details.	**(0.5)** Demonstrates limited understanding of the project. Struggles to communicate key points.
Clarity and Organization	**(1)** Presentation is clear, well-structured, and logically organized. Effectively uses visual aids to enhance understanding.	**(0.5)** Presentation is somewhat clear but may lack some structure and organization. Uses visual aids, but not effectively.	**(0.25)** Presentation is unclear and poorly organized. Visual aids are missing or ineffective.
Engagement and Enthusiasm	**(1)** Shows high level of engagement and enthusiasm throughout the presentation. Captivates the audience and maintains interest.	**(0.5)** Shows some engagement and enthusiasm. Able to maintain audience interest to a certain extent.	**(0.25)** Lacks engagement and enthusiasm. Fails to captivate or maintain audience interest.

Rubrics for Evaluation Component 2: Creativity and Innovation

Criteria	Recommended Scores
Creativity and Innovation	Excellent - 2 marks
	Good - 1 marks
	Not Good - 0 marks

Rubrics for Evaluation Component 3: Project Work and Viva

Criteria	Recommended Scores		
	Excellent (12-15)	**Good (7-11)**	**Satisfactory (0-6)**
Coverage of fundamentals of NodeJS, Request Handling and Routing as per project Based Evaluation-I and II	**(2-3)** Comprehensive understanding of Node.js fundamentals, Request Handling and Routing.	**(1.5-2)** Shows a good understanding of Node.js fundamentals, Request Handling and Routing.	**(0-1.5)** Minimal understanding of Node.js fundamentals, Request Handling and Routing.
Middleware in Express	**(4-5)** Thorough explanation and accurate	**(2-4)** Moderate understanding; occasional	**(0-1.5)** Poor understanding; frequent

	implementation of middleware lifecycle, application-level, router-level, error-handling, and third-party middleware.	mistakes	errors in middleware handling.
Request Lifecycle & Non-Blocking Code	**(3-4)** Clear understanding of request travel in Express; accurately explains blocking vs. non-blocking code; successfully implements body-parser.	**(2-3)** Moderate understanding with some inaccuracies; partial implementation of body-parser.	**(0-1.5)** Minimal understanding; errors in request lifecycle explanation or body-parser usage.
Template Engines & EJS Integration	**(3-4)** Comprehensive knowledge of template engines; accurately uses EJS in Node.js applications for dynamic content rendering.	**(1.5-2)** Adequate understanding with minor issues in EJS usage.	**(0-1.5)** Limited understanding; incorrect or incomplete EJS integration.

Note: -

- Project team must continue the project evaluated in Project Based Evaluation-II and will add functionality accordingly.
- In case student is absent in any lab evaluation, he/she will be given zero in the lab evaluation marks (under all rubrics).

Appendix-D

Rubrics for Project Based Evaluation-Final

Backend Engineering-I (23CS006)

Evaluation Components	Details	Marks
1	Presentation	7
2	File work	8
3	Project Work and Viva	25
	Total	**40**

Rubrics for Evaluation Component 1: **Presentation**

Criteria	Recommended Scores		
	Excellent (5-7)	**Good (3-4)**	**Satisfactory (0-2)**
Understanding and Communication	**(2-3)** Demonstrates thorough understanding of the project. Effectively communicates key points and main ideas.	**(1-1.5)** Demonstrates basic understanding of the project. Communicates key points but may miss some details.	**(0-1)** Demonstrates limited understanding of the project. Struggles to communicate key points.
Clarity and Organization	**(1.5-2)** Presentation is clear, well-structured, and logically organized. Effectively uses visual aids to enhance understanding.	**(1-1.5)** Presentation is somewhat clear but may lack some structure and organization. Uses visual aids, but not effectively.	**(0-0.5)** Presentation is unclear and poorly organized. Visual aids are missing or ineffective.
Engagement and Enthusiasm	**(1.5-2)** Shows high level of engagement and enthusiasm throughout the presentation. Captivates the audience and maintains interest.	**(1)** Shows some engagement and enthusiasm. Able to maintain audience interest to a certain extent.	**(0-0.5)** Lacks engagement and enthusiasm. Fails to captivate or maintain audience interest.

Rubrics for Evaluation Component 2: File work

Criteria	Recommended Scores		
	Excellent (6-8)	**Good (3-5)**	**Poor (0-2)**
Project Report	**(2.5-3)** Project report is according to the specified format.	**(1-2)** Project report is according to the specified format but some mistakes.	**(0-1)** Project report not prepared according to the specified format.
Description of Concepts and Technical Details	**(2.5-3)** Strong description of the technical requirements of the project.	**(1-1.5)** In-sufficient description of the technical requirements of the project.	**(0-0.5)** Poor description of the technical requirements of the project.
Conclusion and Discussion	**(1-2)** Results are presented in very appropriate manner and Project work is well summarized and concluded.	**(1-1.5)** Results presented are not much satisfactory and Project work summary and conclusion not very appropriate.	**(0-0.5)** Results are not presented properly and Project work is not summarized and concluded.

Rubrics for Evaluation Component 3: Project Work and Viva

Criteria	Recommended Scores		
	Excellent (18-25)	**Good (10-17)**	**Satisfactory (5-9)**
Coverage of fundamentals of NodeJS, Request Handling and Routing as per project Based Evaluation-I and II	**(2-4)** Comprehensive understanding of Node.js fundamentals, Request Handling and Routing.	**(1-2)** Shows a good understanding of Node.js fundamentals, Request Handling and Routing.	**(1.5-2.5)** Minimal understanding of Node.js fundamentals, Request Handling and Routing.
Coverage of Third-party middleware, Express, EJS template in Node.js application as per project Based Evaluation-III	**(3-5)** Demonstrates expertise in Third-party middleware, Express, EJS template in Node.js application	**(2-3)** Shows moderate understanding of Third-party middleware, Express, EJS template in Node.js application	**(1.5-2.5)** Shows poor understanding of Third-party middleware, Express, EJS template in Node.js application
Introduction to Databases	**(6-8)**Shows comprehensive knowledge of database concepts, including the differences between SQL and NoSQL databases.	**(3-6)** Demonstrates a basic understanding of SQL and NoSQL databases, with some inaccuracies or limited examples.	**(1-2)** Minimal understanding of database concepts, with little or no distinction made between SQL and NoSQL databases.
Connecting MongoDB with Node.js	**(7-8)** Successfully establishes a connection between MongoDB and a Node.js application, demonstrating proper configuration, CRUD operations, and error handling.	**(4-6)** Adequately connects MongoDB with a Node.js application, but with minor errors in configuration or limited functionality in CRUD operations.	**(1-2)** Fails to establish a proper connection between MongoDB and Node.js, with significant errors or an inability to perform CRUD operations.

Note: -

- Project team must continue the project evaluated in Project Based Evaluation-I, II and III and will add functionality accordingly.
- In case student is absent in any lab evaluation, he/she will be given zero in the lab evaluation marks (under all rubrics).

Appendix-E (Do not print)

Back End Engineering-I

Project Report

Semester-IV (Batch-2023)

Title of the Project

Supervised By:

Faculty Name

Submitted By:

Name, Roll Number (Group)

Department of Computer Science and Engineering
Chitkara University Institute of Engineering & Technology,
Chitkara University, Punjab

Appendix F (Do not print)

Guidelines for the Project Report

Project Report Format

The order in which the content of the project report should be organized is as follows:

Title Page (Format attached)

Abstract

Table of Contents

1. **Introduction**- should include Background, objectives and significance, etc. (3-5 pages)
2. **Problem Definition and Requirements**- Problem statement and software requirements/ hardware requirements/data sets (1-2 pages)
3. **Proposed Design / Methodology** – student may include schematic diagram/ file structure/ (3-5 pages)
4. **Results**- screenshots etc. (10-15 pages)

References (if any, style-API)

Note:

Font: Times New Roman

Size:

- Heading-16 (Bold)-Align left
- Sub heading-14 (Bold)-Align-left
- Paragraph -12 (normal)-Justify

Line Spacing- 1.5

Table/Figures- Number and label each table and figure in order.

Caption for Table/Figure- Times New Roman (12); normal; align-center.

Layout for Sections (Example)-

1. **Introduction**
   - **1.1 Background**
   - **1.2 Objectives**
2. **Problem Definition and Requirements**