

D. Y. Patil College of Engineering & Technology

Kasaba Bawada, Kolhapur

(Approved by AICTE, New Delhi, Govt. of Maharashtra and Permanently Affiliated to Shivaji University Kolhapur)

(An Autonomous Institute)



Capstone Project

Course Code: 221FYM121



Department of First Year Engineering

Academic Year: 2022-23

Semester: II

Group Information:

Branch: Computer Science and Engineering

Div: A

Group: 4

Roll No	Exam Seat No	Name of Students	Mobile No
130	EN22187904	Akash Girish Kurbetti	8329289678
131	EN22133618	Ankit Chandrakant Bhosale	9356829162
136	EN22170956	Vikrant Narayan Kamble	7249717851
112	EN22190128	Ruturaj Sambhaji Patil	7058349400
147	EN22233022	Prathamesh Ramesh Potdar	7028330809

Project Title: Online Shopping Ecommerce Website

Name of Guide: Mr. Ashwin Desai

Mobile: 9860432432

VISION OF THE INSTITUTE

To become a leading Institute in producing high quality technical professionals for Nation Building.

MISSION OF THE INSTITUTE

- To nurture the students with high quality education.
- To promote creativity, excellence and discipline.
- To explore career opportunities for the students.
- To enhance industry-institute interaction and research activities.
- To create social and environmental awareness.

ORGANISATIONAL OBJECTIVES

- To produce technically competent, quality conscious engineers.
- To develop functionally suitable and conducive environment for students and staff for academic purpose.
- To develop the departments into the centre of excellence.
- To strengthen industry institute interaction.
- To help the students for personality development and career guidance.

PROGRAM OUTCOMES

- PO 1-** Engineering Knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
- PO 2-** Problem analysis: Identify, formulate, research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
- PO 3-** Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
- PO 4-** Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
- PO 5-** Modern Tool Usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
- PO 6-** The Engineer and Society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
- PO 7-** Environment and Sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of need for sustainable development.
- PO 8-** Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- PO 9-** Individual and Team Work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
- PO 10-** Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
- PO 11-** Project Management and Finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
- PO 12-** Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

INTRODUCTION:

One of the dictionary meaning is the ‘crown’ or the stone placed on the top of building structure like ‘Kalash on top of temple and Mosques’ or cross on top of Churches’. Capstone project should have emphasis on integration, experiential learning and real world problem solving and hence these project are very important for students to develop the highly essential industry oriented skills and competencies in the students.

COURSE OBJECTIVES:

1. To inculcate independent learning by problem solving with social context.
2. To engages students in rich and authentic learning experiences.
3. To emphasizes learning activities that are long-term, interdisciplinary and student-centric.
4. To provide every student the opportunity to get involved either individually or as a group so as to develop team skills and learn professionalism.

COURSE OUTCOMES: Student will be able to

- CO121.1 Define, analyze and solve societal, rural, health and safety problem.
- CO121.2 Identify and apply appropriate tools.
- CO121.3 Apply ethical practices, project management techniques and work in team.
- CO121.4 Communicate effectively in verbal and written form.
- CO121.5 Prepare the demo project model

TOPICS:

Capstone Project may be a theoretical analysis, modeling & simulation, experimentation & analysis, prototype design, fabrication of new equipment, correlation and analysis of data, software development, etc. or a combination of these.

GROUP STRUCTURE:

Working in supervisor/mentor monitored groups; the students plan, manage, and complete a task/project/activity which addresses the stated problem.

1. There should be team/group of 4 -5 students
2. A supervisor/mentor teacher assigned to individual groups

SELECTION OF PROJECT:

The project demo model for learning is recommended. The model begins with the identifying of a problem, often growing out of a question or “wondering”. This formulated problem then stands as the starting point for learning. Students design and analyze the problem within an articulated interdisciplinary or subject frame or based on Rural/Social internship.

A problem can be theoretical, practical, social, technical, symbolic, cultural, and/or scientific and grows out of students’ wondering within different disciplines and professional environments. A chosen problem has to be exemplary. The problem may involve an interdisciplinary approach in both the analysis and solving phases.

By exemplarity, a problem needs to refer back to a particular practical, scientific, social and/or technical domain. The problem should stand as one specific example or manifestation of more general learning outcomes related to knowledge and/or modes of inquiry.

There are no commonly shared criteria for what constitutes an acceptable project. Projects vary greatly in the depth of the questions explored, the clarity of the learning goals, the content, and structure of the activity.

1. A few hands-on activities that may or may not be multidisciplinary.
2. Use of technology in meaningful ways to help them investigate, collaborate, analyze, synthesize, and present their learning.
3. Activities may include- Solving real life problem, investigation, /study and Writing reports of in-depth study, fieldwork.

RECOMMENDED GUIDELINES AND PHASES:

Capstone project is learning through activity. One of the teachers can be appointed as guide for capstone project group. Following are the recommended guidelines that will work as an initiator and facilitator in process of completion of Capstone project.

1. In first week of commencement of 2nd semester, let the guide create awareness about capstone project (what, why, and how) among the students. Convey students expected outcomes, assessment process and evaluation criteria.
2. Get groups of students registered preferably 4-5 students per group.
3. Assign guide to each group.
4. Provide guidelines for title identification (Problem can be some real-life situation that needs technology solutions. This situation can be identified by rural/social internship, by meeting people around, visiting various industries, society, and institutes. The solution can be prototype, model, convertible solutions, survey and analysis, simulation, and similar).
5. Let students submit the problem identified in prescribed format (Problem Statement, Initial Survey for topic finalization, Abstract, Software, Hardware required, Title)
6. Guide can approve the problem statements based on feasibility and learning outcomes expected for first year engineering students
7. Guide is to monitor progress of the task during phases of project work. Broadly phases may include- requirements gathering, preparing a solution, technology design for the solution.
8. Weekly monitoring and continuous assessment record are to be maintained by guide.
9. Get the report submitted at the end of semester.

ABSTRACT:

"The online shopping website is a user-friendly platform that offers a wide range of products for purchase. With a seamless interface and secure payment options, customers can browse through various categories and easily find the items they need. The website caters to a diverse audience, providing a convenient shopping experience for individuals of all ages and interests. From clothing and accessories to electronics and home goods, the website aims to meet the diverse needs of its customers. With reliable delivery services and a hassle-free return policy, customer satisfaction is at the forefront of the website's mission. Whether shopping for personal needs or gifting purposes, the online shopping website strives to provide an enjoyable and efficient experience for all users."

INTRODUCTION:

What is Ecommerce Website:

An ecommerce website is an online platform where businesses or individuals can sell products or services to customers over the internet. It allows customers to browse through various products, make purchases, and complete transactions online. Ecommerce websites often include features such as product listings, shopping carts, secure payment gateways, and order tracking systems to facilitate a seamless shopping experience for customers.

How this kind of website works:

1. **Product sourcing:** Ecommerce websites can link to suppliers or manufacturers' websites to source products. This allows them to display a wider range of products without physically stocking them. When a customer places an order, the ecommerce website can forward the order details to the supplier for fulfilment.
2. **Payment gateways:** Ecommerce websites need secure payment gateways to process online transactions. These gateways often redirect customers to third-party payment processors such as PayPal or Stripe. By linking to these payment processors, ecommerce websites can provide a secure and trusted payment option for customers.
3. **Shipping and logistics:** Ecommerce websites may link to shipping carriers' websites to provide real-time shipping rates and tracking information. This allows customers to select their preferred shipping method and track their orders directly from the ecommerce website.
4. **Social media integration:** Ecommerce websites can link to social media platforms like Facebook, Instagram, or Pinterest. This integration enables businesses to showcase their products on social media and drive traffic back to their ecommerce website for purchase.
5. **Affiliate marketing:** Ecommerce websites can partner with other websites or influencers through affiliate programs. By linking to these partner websites, ecommerce websites can earn commissions on sales generated through those referral links.

These are just a few examples of how ecommerce websites can link to other websites to provide additional functionality and improve the overall shopping experience for customers.

INITIAL SURVEY FOR FINALIZATION OF TITLE (LITERATURE SURVEY):

1. The purpose of our ecommerce website is to provide customers with a convenient and user-friendly platform to purchase products and services online.
2. Currently, we source products for our ecommerce website through a combination of partnerships with suppliers, manufacturers, and distributors. We also have a system in place for dropshipping certain products.
3. Yes, we have a secure payment gateway in place to ensure safe and encrypted online transactions.
4. We have established partnerships with shipping and logistics companies to handle the shipping and delivery of orders placed on our ecommerce website. We also offer various shipping options for customers to choose from.
5. Yes, we are currently integrating our ecommerce website with various social media platforms to increase brand visibility, engage with customers, and drive traffic to our website.
6. We would like to add features such as product recommendations based on customer preferences, personalized shopping experiences, and seamless integration with third-party review platforms.
7. The main goals we hope to achieve by linking to other websites on our ecommerce platform include expanding our product offerings, increasing customer engagement and satisfaction, and driving more traffic and sales.
8. We have identified specific websites and platforms that align with our target audience and industry, such as industry influencers' blogs, relevant online communities, and complementary product/service providers.
9. Our main concern is ensuring that the websites we link to are reputable, reliable, and provide a positive user experience for our customers. We also want to make sure that any data shared between our ecommerce platform and linked websites is secure and protected.

PROBLEM STATEMENT:

The current problem statement aims to address the issues and challenges faced by an e-commerce website in order to improve its overall performance, user experience, and business growth.

Inefficient User Interface:

The existing e-commerce website lacks an intuitive and user-friendly interface, resulting in a cumbersome browsing and shopping experience for customers. This leads to decreased customer satisfaction, lower conversion rates, and lost business opportunities.

Limited Product Discoverability:

The website's search functionality and product categorization are inadequate, making it difficult for users to discover and explore the full range of products offered. This limitation hampers the ability of customers to find relevant products easily, resulting in reduced sales and missed cross-selling or upselling opportunities.

Ineffective Personalization and Recommendations:

The current system fails to provide personalized product recommendations based on user preferences, browsing history, and purchase patterns. As a result, customers do not receive tailored suggestions, reducing the likelihood of making additional purchases and limiting the potential for increased revenue.

Poor Mobile Responsiveness:

With the increasing use of mobile devices for online shopping, the website's lack of responsive design negatively impacts user experience on smaller screens. Difficulties in navigation, distorted layouts, and slow loading times discourage mobile users and contribute to high bounce rates, ultimately leading to lost sales and decreased customer loyalty.

Insecure Payment and Checkout Process:

The existing payment and checkout process lacks robust security measures, making customers hesitant to provide sensitive financial information. This raises concerns about data privacy and exposes the website to potential security breaches, causing a loss of customer trust and credibility.

Inadequate Customer Support and Communication, Inefficient Inventory Management, Lack of Integration with Social Media and Marketing Channels etc.

By addressing these challenges and implementing appropriate solutions, the e-commerce website can enhance its user experience, increase customer satisfaction, and drive business growth in a highly competitive online marketplace.

OBJECTIVE OF PROJECT:

1. Improved User Interface.
2. Enhanced Product Discoverability.
3. Efficient Inventory Management

RESULT AS PER OBJECTIVES:

1. Improved User Interface:

- Increase in average session duration and page views per user, indicating improved user engagement.
- Decrease in bounce rate, indicating that users are finding the website more appealing and navigating it more effectively.
- Positive feedback and reviews from customers regarding the improved user interface.

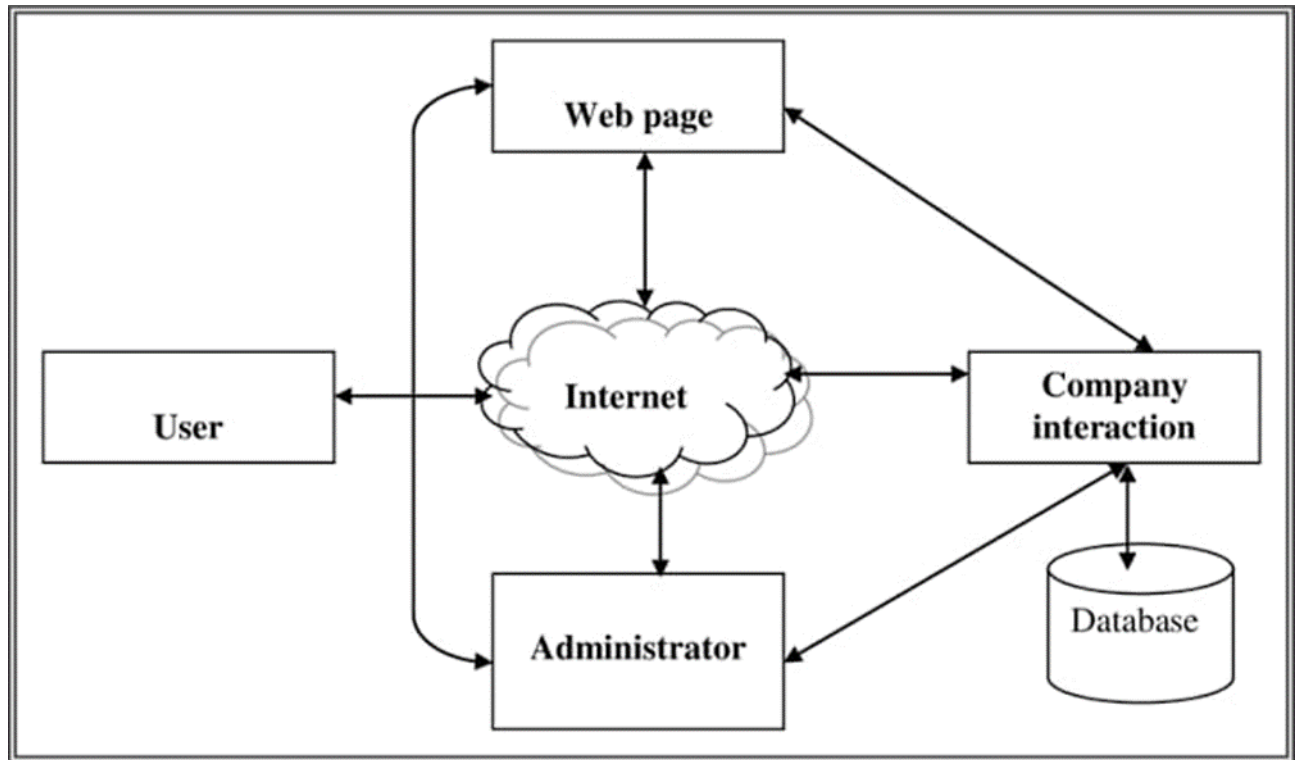
2. Enhanced Product Discoverability:

- Increase in the number of product views, indicating that customers are exploring a wider range of products.
- Increase in add-to-cart and conversion rates, demonstrating that customers are finding relevant products more easily and making purchases.
- Higher average order value, indicating successful cross-selling and upselling efforts.

3. Efficient Inventory Management

- Accurate and real-time inventory availability information visible to customers

FIGURE/CIRCUIT DIAGRAM/BLOCK DIAGRAM/FLOW CHART:



CONCLUSION AND FUTURE SCOPE:

In conclusion, an e-commerce website plays a vital role in today's digital marketplace, offering businesses a platform to showcase and sell their products or services online. It provides customers with a convenient and accessible way to browse, select, and purchase items from the comfort of their own homes. Through effective design, user experience, and integration of various features, an e-commerce website can significantly impact the success and growth of a business.

1. **Enhanced Personalization:** E-commerce websites can further enhance personalization by leveraging advanced technologies such as artificial intelligence and machine learning. By analysing user behaviour, preferences, and purchase history, websites can offer highly targeted and personalized product recommendations, customized promotions, and tailored shopping experiences.
2. **Augmented Reality (AR) and Virtual Reality (VR):** Integrating AR and VR technologies into e-commerce websites can provide customers with immersive and interactive experiences. Virtual try-on features, 3D product visualization, and virtual showrooms can help customers make more informed purchasing decisions and enhance their overall shopping experience.
3. **Mobile Commerce (m-commerce) Optimization:** As mobile devices continue to dominate online traffic, optimizing e-commerce websites for mobile platforms becomes crucial. Future advancements may include faster loading times, improved mobile responsiveness, and seamless integration with mobile payment systems to provide a frictionless shopping experience for mobile users.
4. **Voice Commerce:** With the rise of voice assistants and smart speakers, voice commerce is gaining prominence. E-commerce websites can integrate voice search capabilities and voice-activated purchasing features to cater to customers who prefer voice-based interactions and enable a hands-free shopping experience.
5. **Social Commerce Integration:** Integrating e-commerce websites with social media platforms allows businesses to tap into the vast user base and engage with customers in a more social and interactive manner. Features like "Buy Now" buttons, shoppable posts, and social sharing options can drive conversions and customer acquisition.
6. **Sustainability and Ethical Shopping, Cross-border Expansion Etc.**

In summary, the future of e-commerce websites lies in leveraging emerging technologies, enhancing customer experiences through personalization and immersive features, and adapting to evolving consumer preferences. By embracing these opportunities, e-commerce websites can continue to thrive and shape the future of online retail.

REFERENCES: (WEBSITE/BOOKS/PAPERS):

Open Source ChatGPT: chat.openai.com

YouTube Channel: Reference: https://youtu.be/nGhkic_7Mkk

YouTube Channel: Code with Harry

YouTube Channel: Apna College

Weekly Planning Sheet (Activity Calendar)

Week No.	Activity Planned	Activities Completed	Signature of Students	Signature of guide
1 15/04/2023	Capstone Project Information Group Formation	On what project should be done was decided. A web development based should be done using html and CSS was finalized.		
2 29/04/2023	Project Title identification And Literature survey	A Ecommerce store website using html, CSS project was decided. Apni Dukan titled was finalized.		
3 06/05/2023	Project model preparation Progress-I	Basic coding through html, CSS was done and what should be theme for website was finalized.		



CAPSTONE PROJECT

Week No.	Activity Planned	Activities Completed	Signature of Students	Signature of guide
4 20/05/2023	Project model preparation Progress-II	Pictures are embedded in Ecommerce Store website through image and HTML & CSS.		
5 03/06/2023	Final Project	Final project with 8 Categories is completed. And added link of amazon affiliate of the product.		
6 30/06/2023	Project Exhibition	Project Exhibition in front of the Expert members and the Evaluators.		

STUDENT - GUIDE MEET RECORD FOR PROJECT WORK:

Meeting No: 1			Date: 15/04/2023
Roll No	Name of Students	Students Sign	Point Discussed & Details of work assigned and date for next meet
130	Akash Girish Kurbetti		Selection of topic. In which language project should be done.
131	Ankit Chandrakant Bhosale		
112	Ruturaj Sambhaji Patil		
136	Vikrant Narayan Kamble		
147	Prathamesh Ramesh Potdar		
Meeting No: 2			Date: 29/04/2023
Roll No	Name of Students	Students Sign	Point Discussed & Details of work assigned and date for next meet
130	Akash Girish Kurbetti		Finalized the coding language and finding references from internet.
131	Ankit Chandrakant Bhosale		
112	Ruturaj Sambhaji Patil		
136	Vikrant Narayan Kamble		
147	Prathamesh Ramesh Potdar		
Meeting No: 3			Date: 6/5/2023
Roll No	Name of Students	Students Sign	Point Discussed & Details of work assigned and date for next meet
130	Akash Girish Kurbetti		Discussed on what should be theme of website and interface of the website. Coding of website through html, CSS.
131	Ankit Chandrakant Bhosale		
112	Ruturaj Sambhaji Patil		
136	Vikrant Narayan Kamble		

147	Prathamesh Ramesh Potdar		
Meeting No: 4		Date: 20/05/2023	
Roll No	Name of Students	Students Sign	Point Discussed & Details of work assigned and date for next meet
130	Akash Girish Kurbetti		Theme is finalized and Basic interface is done and discussed on more improvements of the website.
131	Ankit Chandrakant Bhosale		
112	Ruturaj Sambhaji Patil		
136	Vikrant Narayan Kamble		
147	Prathamesh Ramesh Potdar		
Meeting No: 5		Date: 03/06/2023	
Roll No	Name of Students	Students Sign	Point Discussed & Details of work assigned and date for next meet
130	Akash Girish Kurbetti		Frontend of the website is designed through HTML and CSS.
131	Ankit Chandrakant Bhosale		
112	Ruturaj Sambhaji Patil		
136	Vikrant Narayan Kamble		
147	Prathamesh Ramesh Potdar		
Meeting No: 6		Date: 30/06/2023	
Roll No	Name of Students	Students Sign	Point Discussed & Details of work assigned and date for next meet
130	Akash Girish Kurbetti		Normal changes in website such as graphics and interface are changed.
131	Ankit Chandrakant Bhosale		
112	Ruturaj Sambhaji Patil		
136	Vikrant Narayan Kamble		
147	Prathamesh Ramesh Potdar		

INTERNSHIP EVALUATION REPORT

Roll No	Idea Inception Individual	Individual and Team Assessment				Documentation (group)	Demonstration Individual	Contest Participation (group)	Awareness (group)	Final Total	Grade
		Outcome of Project (group)	Problem Solving Skills Individual	Solution Provided (group)	Final Product (group)						
	(5)	(10)	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(50)	

Grade: 1 to 20: Satisfactory, 21 to 30: Good, 31 to 40: Very Good, 41 to 50: Excellent

Expert Committee Members:

Sr. No	Name of Expert	Department	Signature
1.			
2.			
3.			
4.			

RUBRICS FOR PROJECT PRACTICAL (50 MARKS):

Sr. No	Criteria	Excellent	Good	Average
1	Idea Inception	Active participation in brain storming, Idea is interesting, Description of Project Problem Statement and scope is clearly stated.	Moderate participation in brain storming, Idea is Fairly interesting, Problem Statement and scope somewhat clearly stated.	Minimal participation in brain storming, Idea is not interesting, Problem Statement and scope unclearly stated.
	5	5	4-3	2-0
2	Outcomes of project	Results are as per the specifications with demonstration of working model. Conclusion and future scope of the project is properly known to students.	Results are not as per the specifications, somewhat proper with improper demonstration of working model. Conclusion and future scope of the project is not properly known to students.	Results are not proper without working model. Conclusion and future scope of the project is not known to students.
	10	10-8	7-4	3-0
3	Problem solving skills	Student analyses and solves the entire problem faced for project execution correctly. Handles complex questions with ease and confidence.	Student analyses and solves most of the problems correctly for execution of project. Can give explanation partially.	Student rarely analyses and solves the problem correctly for execution of project. Unable to explain project properly.
	5	5	4-3	2-0
4	Solution provided	Student provides solution which help solve social/health/economic challenges with proper explanation and use of modern tools and technology.	Provides solution which has limited scope to solve social/health/economic challenges with proper explanation and moderate use of modern tools.	Unable to provide proper solution to solve social/health/economic challenges. No use of modern tool.
	5	5	4-3	2-0

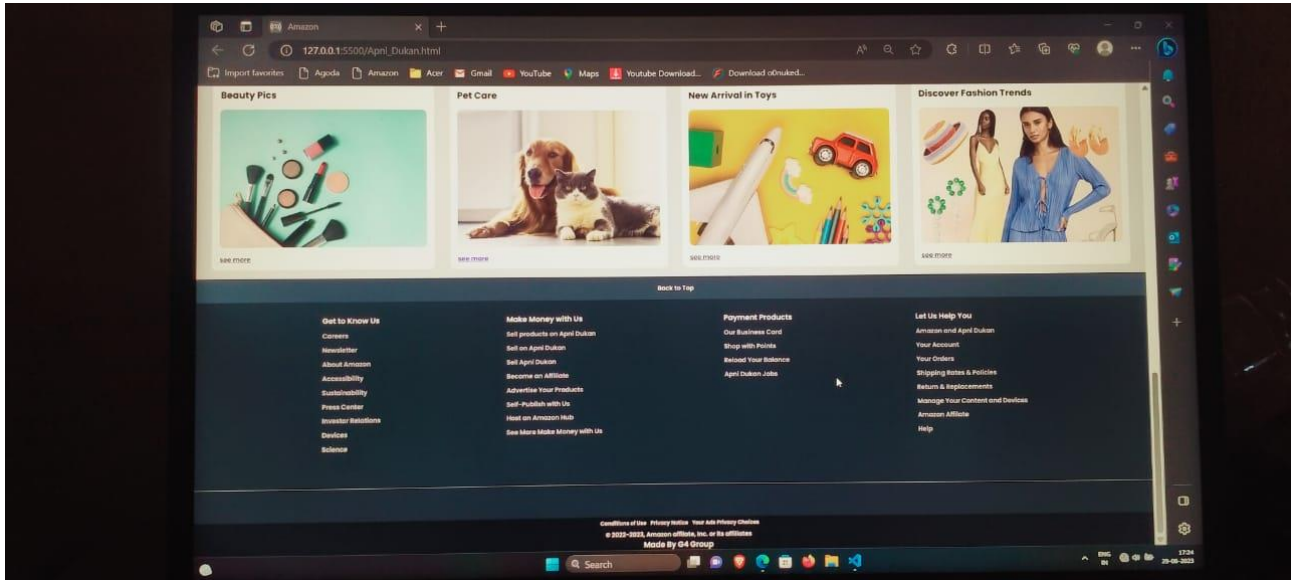
5	Documentation Literature survey, Abstract, Activity calendar.	Excellent balance of written information. Perfect grammar and proper use of technical terminology. Completes the work book in given time and maintains the activity calendar by taking signature of guide weekly	Good balance of written information. Perfect grammar and proper use of technical terminology. Partially completes the workbook in given time and maintains the activity calendar but takes the signature of guide quarterly.	Poor Grammar. Does not complete the workbook in given time and unable to maintain the activity calendar duly signed by guide.
	5	5	4-3	2-0
6	Demonstration Poster and PPT	Student has properly prepared the presentation including all necessary explanations for all topics. Student is completely prepared and gives entire presentation confidently.	Student has prepared the presentation with fewer explanations for all topics. Student is completely prepared and gives entire presentation with less confidence.	Student has not prepared the presentation. Student is not prepared for giving presentation and has no confidence
	5	5	4-3	2-0
7	Final product Model and Budget letter	Final product prepared submitted on time. Highly effective use of available resources. Understands and manages cost implication of project. Superior time management skills. Effective management of workload.	Final product partially prepared. Less effective use of available resources. Partially understands and manages cost implication of project. Good time management skills. Less effective management of workload	Prototype submitted through soft copy/PPT. No use of available resources. Does not understand and manages cost implication of project. No time management skills. No management of workload.
	5	5	4-3	2-0
8	Contest participation	Actively participated in Competition as a team.	Good participation as a team in competition.	Poor participation as team in competition.
	5	5	4-3	2-0



9	Awareness	Student is totally aware about the environmental and ethical aspects of project.	Student is partially aware about the environmental and ethical aspects of project.	Student is not aware about the environmental and ethical aspects of project.
	5	5-4	3-2	1-0
Out of 50	50	50-39	39-23	23-0

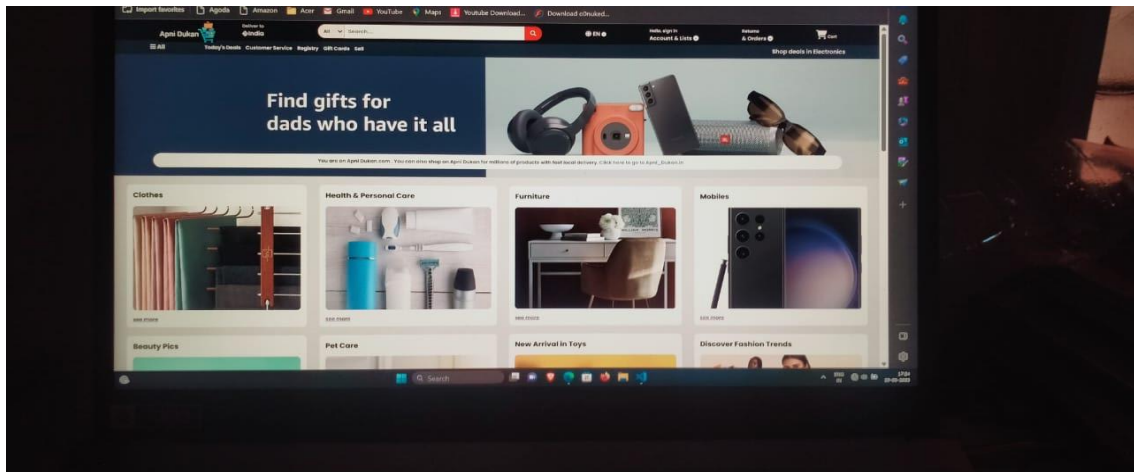
GLIMPSES OF INTERNSHIP

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CERTIFICATE

Certificate ID:

This is to certify that, following students,

Sr. No	Roll No	Exam Seat No	Name of Students
1	130	EN22187904	Akash Girish Kurbetti
2	131	EN22133618	Ankit Chandrakant Bhosale
3	112	EN22190128	Ruturaj Sambhaji Patil
4	136	EN22170956	Vikrant Narayan Kamble
5	147	EN22233022	Prathamesh Ramesh Potdar

has completed Capstone Project satisfactorily in the department of First Year Engineering, in the academic year 2022-23, semester second.

Guide :- Mr. Ashwin Desai

H.O.D

Date: 30/06/2023