



AMITY UNIVERSITY UTTAR PRADESH

**Summer Internship On
PRODUCT CATALOG**

Submitted to

Amity Institute of Information Technology

In partial fulfilment of the requirements for the award of the degree of

Master of Computer Applications

Submitted to:
Dr Monika Sharma

Submitted by:
Punam Kumari
A010145020037
Batch 2020-2022

DECLARATION BY STUDENT

I **Punam Kumari** student of MCA hereby declare that the Summer internship titled “**Product Catalog**” which is submitted by me to **Dr Monika Gupta** Ma'am, Amity Institute of Information Technology, Amity University Uttar Pradesh, Noida, in partial fulfilment of requirement for the award of the degree of **MASTER OF COMPUTER APPLICATIONS** has not been previously formed the basis for the award of any degree, diploma or other similar title or recognition.

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Place: - Noida

(Student Signature)

Punam Kumari

A010145020037

Semester: 3

GUIDE CERTIFICATE

I hereby certify that the Project Report by **Punam Kumari** student of MCA 3 (A010145020037) with title “**Product Catalog**” which is submitted to Amity Institute of Information Technology, Amity University, Uttar Pradesh, Noida in partial fulfilment of requirement for the award of the degree of **MASTERS OF COMPUTER APPLICATIONS** is an original contribution with existing knowledge and faithful record of work carried out by him/her under my guidance and supervision and to the best of my knowledge this work has not been submitted in part or full for any Degree or Diploma to this University or elsewhere.

Date :

(SIGNATURE)

Noida

Dr MONIKA SHARMA

(Amity Institute Of Information technology, AUUP Noida)

INDUSTRY CERTIFICATE



SnapGreen India Pvt. Ltd.

Always there for you

Mr. Manish Kumar
(CEO, Snapgreen)

30th July 2021

TO WHOMSOEVER IT MAY CONCERN

This is to certify that Ms. Punam Kumari has successfully completed her internship at Snapgreen India Private Limited as Product Catalog Technical Manager. She was enrolled for period of 26 days starting from July 5, 2021.

As an intern, She actively worked on product catalog APIs and successfully onboarded 1200 products. During the internship, She demonstrated good technical skills with self motivated attitude to learn new things.

We wish her all the best for her endeavour!

Date: 30-July-2021

Place: Patna

- This is computer generated message.

contact@snapgreen.in

<https://snapgreen.in>

#101 Plot No. 492, New Anumandal, Daudnagar, Aurangabad, Bihar - 824143

ACKNOWLEDGEMENT

I wish to express my sincere gratitude to Mr.Surajdev Kumar Pandey, Managing Director for Providing me an opportunity to do my internship and project work in “Snapgreen India Pvt Ltd”.

I sincerely thank Dr Monika Sharma for their guidance and encouragement in carrying out my project work. I also wish to express my gratitude to the officials and other staff members of Snapgreen India Pvt Ltd who helped me during the period of this project work.

I am Also very thankful to the Director of Amity University (Noida) and AIIT for providing me the opportunity to embark on this project.

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Abstract

Product catalog is a service where admin can upload and modify the product and category details on E-commerce websites. It requires optimized and fast API design at backend as well as at frontend. Backend also includes the database design of product and category table design where products and categories are stored relationally.

A Product Catalog is a type of marketing collateral that lists essential product details that are helpful to a buyer to make a good and profitable purchase decision.

KEYWORD: Product Catalog, Marketing Collateral

Executive summary

1. Product get API design and development
2. Category get API design and development
3. Product upload API
4. Product modify POST API.
5. Database design

1. INTRODUCTION

As part of the curriculum, students had to complete a four-week Summer Internship programme. Because I was interested in Product CATALOG, I chose to work for “Snapgreen India Private Limited”. This two-year-old Patna-based software firm focuses on providing you fast and fresh groceries at your doorsteps. I chose a start-up firm because it allows me to explore new things, & I picked Product Catalog since it is in rapid demand in the e-commerce industry. Product Catalog is rapidly evolving & will continue to do so in the future. I learnt all the basic work which happens in product catalog in E-Commerce. So, I am very thankful for my summer internship. It was a great opportunity for me to get ideas about the GET, POST, PUT and DELETE API in PHP and Javascript. I now know exactly when software engineers write GET and POST API. Furthermore, this internship helped me gain information about database design and the relation between tables. It enhanced my knowledge of primary key and foreign key in the database.

1.1 Company's Profile:

The company is working in E-commerce and food processing fields. It has on board all kinds of groceries products. It is FSSAI licensed company and hence it is processing raw materials and supplying processed products to households.

URL: <https://snapgreen.in/>



Fig No 1: SnapGreen Logo

1.2 Company objective:

The main objective of the company is to provide great service to the customers and scale it large firms and provide thousands of employment.

1.3 Vision:

To take over the rural market in E-commerce and onboard rural merchants and customers on the platform.

1.4 Services Offered:

- Free delivery of groceries.
- On demand bulk supply of goods.
- Provide easy access to selling and buying goods to merchants and customers.

TYPE	PRIVATE LIMITED
INDUSTRY	E-COMMERCE
FOUNDED	2018
HEADQUARTER	DAUDNAGAR,BIHAR
CLIENT	INDIA
WEBSITE	WWW.SNAPGREEN.IN
GOAL	Providing great E-commerce experience to customers

Table 1: Company Details

2 . Work Profile

Under the supervision of Mr Surajdev Kumar Pandey, my Industry Guide, I worked as a Product Catalog intern. I was a member of a Product Catalog team under a team leader. However, I was in charge of the company's Product Catalog

Technical Manager. As a result, I had the opportunity to work on a wide range of software frameworks like angularjs, nodejs etc.

Note: As per corporate policy, I am unable to reveal sensitive data and statistics of this company.

2.1 PRODUCT CATALOG

Product catalog is a core feature of E-commerce where merchants or admin do their changes in product on daily basis. It helps admin to change the prices, images, description of the product on a regular basis as per the market.

It has to be made in such a way where thousands of merchants can modify their products together. API should be scalable to accommodate a large number of requests from the client.

This involves not only optimized API design but database design is also crucial to scale the overall system.

These reports are exceptionally typical both in the B2B and B2C spaces.

2.2 Who Needs Product Catalogs ?

Product Catalog are valuable to a few business clients and gatherings like salesmen, inside deals, purchasers, store representatives, field advertisers, and supervisors. Here's the manner by which each gathering utilizes it.

Sales reps and inside outreach bunches use a thing list to pass on urgent information about a thing or the help of their customers. They can suggest it while talking with their conceivable outcomes and customers about the benefits of using their things.

Buyers and bosses need it as reference material while making a purchase decision. It helps them with differentiating different things/organizations from various traders and pick the most fitting option for their business.

Store and appropriation focus bosses, shift chiefs, and managers use it to ponder the nuances of the stock in their godowns.

Field publicists can use it while they are walking customers through demos of their things and game plans. It helps them with bouncing significant into their commitment and offer worth to their customers as the last assembling is experiencing the thing.

External social occasions like associations, accessories, offshoots, and worth added sellers use it to get information about a thing and organization and offer it to end-customers.

2.3 Why is a product catalog needed?

- For DIY(Do it yourself) feature.
- To automate the system and onboard the merchants smoo

And Some Reason For Why We need:

- To Gain Information Easily.
- Reduce Business Cycles
- Help Sales Reps Sell
- Enhance Branding
- Improve Conversion Rate
- Enhances User Experience
- Smooth Flow of Information

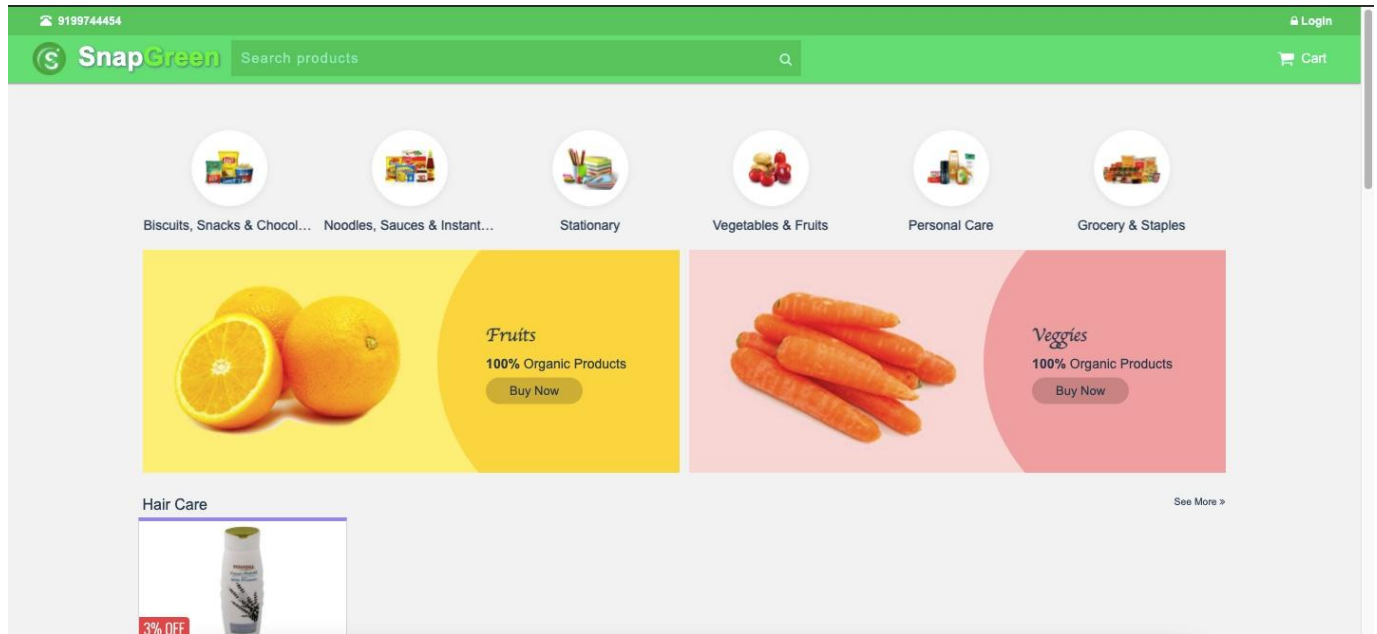
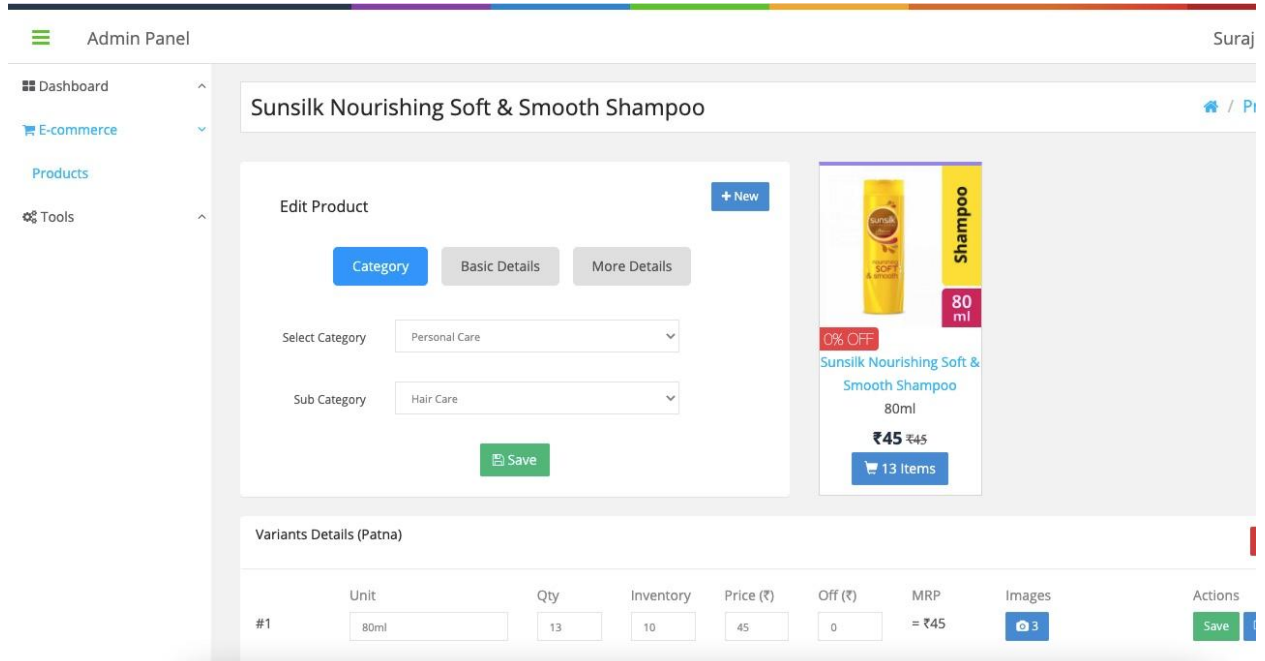
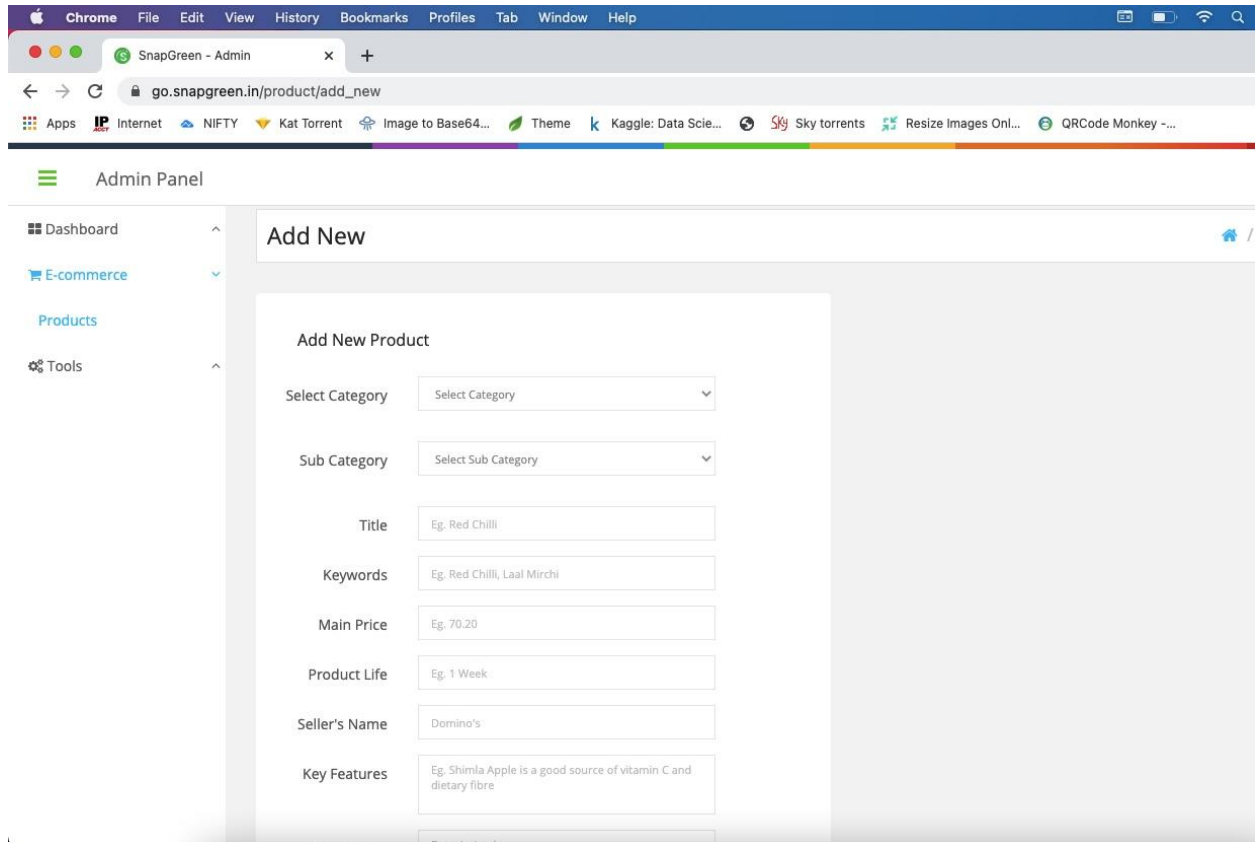


Fig No 2: Product Catalog

Backend



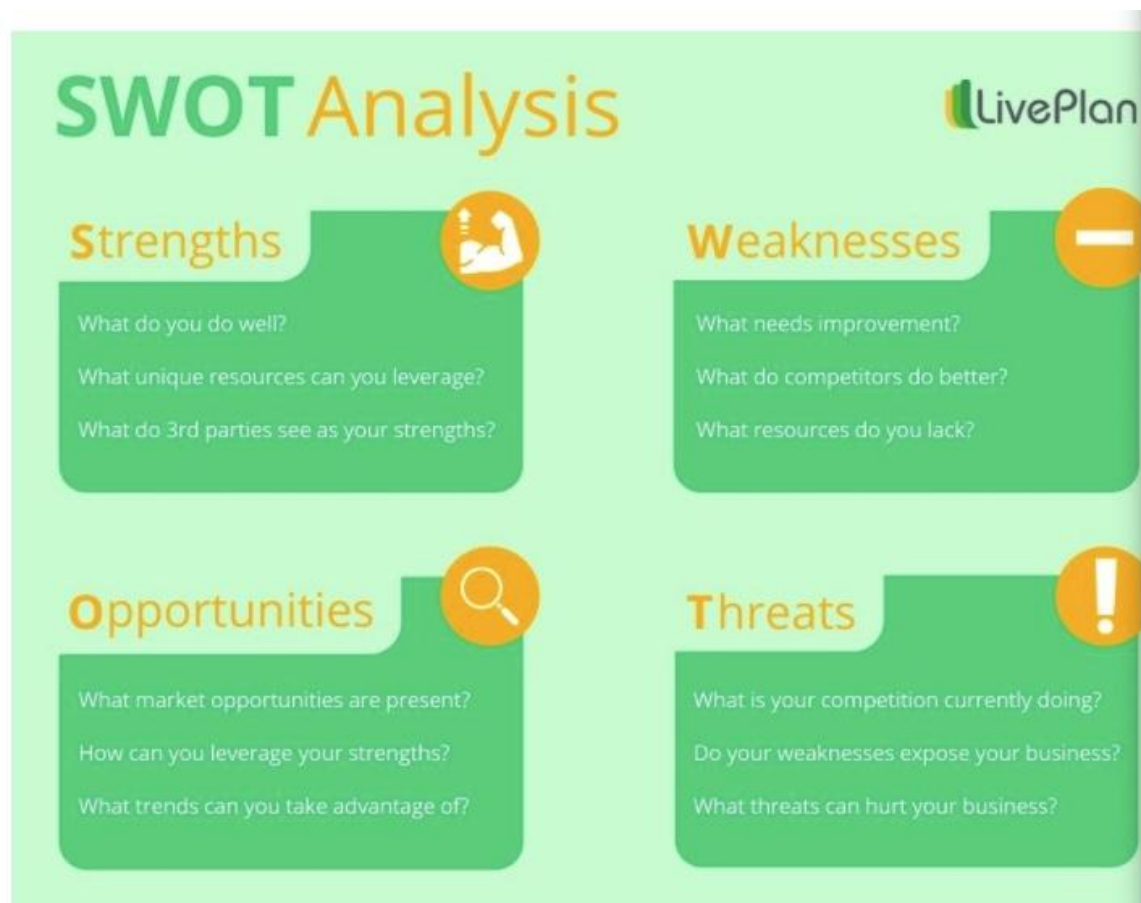


2.3 Best practices for E-Commerce Product Catalog management

- Use a single class for each work.
- Have a separate API for every work like uploading new product, edit product.
- Make GET calls faster by reading data from slave hosts of the database.
- Supply the information in the post body not on GET urls.
- Upload edit will go to the master host of the database.
- Include interfaces for scalability.
- Use ACID properties for all transactions.

3. SWOT ANALYSIS

A SWOT analysis is an incredibly simple, yet powerful tool to help you develop your business strategy, whether you're building a startup or guiding an existing company. It stands for Strengths, Weaknesses, Opportunities, and Threats.



4. LEARNING OUTCOMES

4.1 Learning:

1. Got ideas about different kinds of APIs and their needs.
2. Learned how to make GET, POST, PUT APIs.
3. Learned about json data and their ease of usage.
4. Learned Database design and relation with different tables.
5. Got to know the primary key and foreign key in the table.

4.2 Limitations:

1. Implemented only some part of GET API.
2. Some features like upload parallelly were not working.
3. System used a singleton design so there was a single database connection.

5. FUTURE SCOPE

- Scale the API to handle a large number of products at the same time.
- Handle a large number of requests concurrently.
- Upload images by breaking it into chunks parallelly

6. References

- https://tutorialsclass.com/php-rest-api-file_get_contents/
- <https://stackoverflow.com/questions/56570985/how-to-get-data-from-api-and-show-it-on-php-page>
- <https://stackoverflow.com/questions/5647461/how-do-i-send-a-post-request-with-php>
- https://www.w3schools.com/tags/tag_img.asp
- https://www.w3schools.com/php/php_file_upload.asp



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— **UTTAR PRADESH** —

AMITY INSTITUTE OF INFORMATION & TECHNOLOGY

Amity University Uttar Pradesh

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Industry Guide

Name: Surajdev Kumar Pandey

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Fax: 06328231068

E-mail: contact@snapgreen.in

Project Information

1)Duration(26 Days)

Commencement Date: 5-07-2021

Last date:30-07-2021

2)Project Topic

Product Catalog

3)Project Objective:

- Writing APIs
- Validating the requirements of data.
- Uploading images smoothly.
- Onboarding merchants easily.
- Database design.

4)Methodology To Be Adopted:

Company works on agile methodology as a whole where we had update meeting in the morning and then discussion with guide on the process of capturing data from APIs.

5) Brief Summary Of Project :

Product catalog is a service where admin can upload and modify the product and category details on E-commerce websites. It requires optimized and fast API design at backend as well as at frontend. Backend also includes the database design of product and category table design where products and categories are stored relationally.

**Signature
(Student)**

Punam Kumari

**Signature
(Faculty Guide)**

**Signature
(Industry Guide)**

Surajdev Pandey



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DAILY DIARY

Student Name: Punam Kumari

Enrolment Number: A010145020037

Program: MCA

MONTH SUMMARY

Dates	Topic
5-07-2021	Joined in the company as an Intern, filled online forms, get to know about the company and company vision.
6-07-2021	Had a meeting with Mr. Surajdev Panday in Snapgreen India Pvt Ltd. Introducing the reporting manager.
7-07-2021	Meeting with the HR for my on-boarding process as an intern. Also discuss the internship agenda.
8-07-2021	Understanding of Product Catalog.
9-07-2021	Analysing the Product Catalog.
10-07-2021	Verification of all Products in their Category.
11-07-2021	Verifying the Products in their Category.
12-07-2021	Understanding of APIs.

13-07-2021	Understanding of APIs.
14-07-2021	Development of Upload API
15-07-2021	Development continued
16-07-2021	Table and it's relation understanding with possible tables.
17-07-2021	Full table understanding.
18-07-2021	Testing of API with Website.
19-07-2021	Addition of sum products.
20-07-2021	Addition of sum products in their category.
21-07-2021	Checked Products from other sites and did comparative analysis and made recommendations.
22-07-2021	Checked Products from other sites and did comparative analysis and made recommendations.
23-07-2021	Changed the Price of products on a daily basis(Added offer in product detail.
24-07-2021	Changed the Price of products on a daily basis(Added offer in product detail.
25-07-2021	Update the products on their offer basis scheme.
26-07-2021	Made database design
27-07-2021	Made database design
28-07-2021	APIs Testing
29-07-2021	APIs Testing
30-07-2021	Image Compression



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Weekly Progress Report-No 1

THE COMMENCING WEEK: 5-07-21 To 11-07-21

ENROLLMENT NUMBER: A010145020037

PROGRAM: MCA STUDENT

NAME: PUNAM KUMARI

FACULTY GUIDE NAME: Dr MONIKA SHARM

PROJECT TITLE: PRODUCT CATALOG

TARGETS SET FOR THE WEEK :

- Analyzing the agenda
- To know about the company and its vision

ACHIEVEMENTS FOR THE WEEK:

- Participated in the organization as an Intern, filled online forms, got to think about the organization and friends' vision.
- Had a interaction with Mr.Surajdev Kumar Pandey.
- Presenting the announcing supervisor.
- Meeting with the HR for my on-boarding measure as an understudy. Additionally, examine the temporary job plan.
- Communicated with my Reporting Manager.
- Explain about the work and plan.

FUTURE WORK PLANS:

- To Learn Product Catalog Basics.
- Explore different types of E-Commerce Techniques.
- Selecting the techniques.
- Introduction of different types of API.



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WEEKLY PROGRESS REPORT- NO 2

FOR THE COMMENCING WEEK: 12-07-21 To 18-07-21

ENROLLMENT NUMBER: A010145020037

PROGRAM: MCA STUDENT

NAME: PUNAM KUMARI

FACULTY GUIDE NAME: Dr MONIKA SHARMA

PROJECT TITLE: PRODUCT CATALOG

TARGETS SET FOR THE WEEK :

- Explore different types of Product Catalog Category
- Looking for main aims and objectives.

ACHIEVEMENTS FOR THE WEEK:

- Get to Know about Product Catalog Basics.
- Explore different types of Product Catalog Category.
- Selecting the techniques for the work.

FUTURE WORK PLANS:

- Introduction and Validation of APIs
- Adding Product detail in their category.



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WEEKLY PROGRESS REPORT- NO 3

FOR THE COMMENCING WEEK: 19-07-21 To 25-07-21

ENROLLMENT NUMBER: A010145020037

PROGRAM: MCA STUDENT

NAME: PUNAM KUMARI

FACULTY GUIDE NAME: Dr MONIKA SHARMA

PROJECT TITLE: PRODUCT CATALOG

TARGETS SET FOR THE WEEK :

- Understanding of GET, POST, PUT APIs.
- Making end points for required APIs.
- Understanding of data and variables needed for the APIs.

ACHIEVEMENTS FOR THE WEEK:

- Got ideas about all APIs.
- Checked similar industry APIs and how they have made it.
- Created template for each APIs.

FUTURE WORK PLANS:

- Developments of GET API of products details and category details by their id.
- Make json and all required fields of upload API.



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Amity University Uttar Pradesh

WEEKLY PROGRESS REPORT- NO 4

FOR THE COMMENCING WEEK: 26-07-21 To 30-07-21

ENROLLMENT NUMBER: A010145020037

PROGRAM: MCA STUDENT

NAME: PUNAM KUMARI

FACULTY GUIDE NAME: Dr MONIKA SHARMA

PROJECT TITLE: PRODUCT CATALOG

TARGETS SET FOR THE WEEK :

- Development of GET api by product id and category ID.
- Developments of POST API to upload images and save it to the database.
- Development of search API by product name.

ACHIEVEMENTS FOR THE WEEK:

- Got to know how data models work in GET calls.
- Got idea about insertion of data in tables according to design.

FUTURE WORK PLANS:

- How to scale image upload API.
- How to make it fast.