

A PRELIMINARY REPORT ON

Image-Editor

SUBMITTED TO THE SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE
IN THE PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE AWARD OF THE DEGREE

OF

BACHELOR OF COMPUTER ENGINEERING

SUBMITTED BY

Karki Janhvi Khadak
TE C 05

UNDER GUIDANCE OF

Prof. P. V. Raut



Sinhgad Institutes

DEPARTMENT OF COMPUTER ENGINEERING

STES'S

SINHGAD INSTITUTE OF TECHNOLOGY, LONAVALA

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SAVITRIBAI PHULE PUNE UNIVERSITY

2022-2023



Sinhgad Institutes

CERTIFICATE

This is to certify that the Internship report entitles

“Image-Editor”

Submitted by

Student name : Karki Janhvi Khadak

Roll no : TE C 05

is a bonafide student of this institute and the work has been carried out by him/her under the supervision of **Prof. P. V. Raut** and **Dr. S. D. Babar**. This work is approved for the partial fulfillment of the requirement of Savitribai Phule Pune University, for the award of the degree of **Bachelor of Engineering** (Computer Engineering)

(Prof. P. V. Raut)

Internal Guide
Department of Computer Engineering

(DR. S. D. BABAR)

Head,
Department of Computer Engineering

(Dr. M. S. GAIKWAD)

Principal,
Sinhgad Institute of Technology, Lonavala

Place : Lonavala

Date : 05/05/2023



Date: 15/02/2023

INTERNSHIP CERTIFICATE

This is to certify that **Janhvi Khadak Karki** has worked as a **Full Stack Developer Intern** during the period 12/12/2022 to 12/02/2023 and has successfully completed the internship. During the internship period, Janhvi Khadak Karki has shown an incredible amount of responsibility, sincerity, a genuine willingness to learn and zeal to take on new assignments & challenges. In particular, the development skills are par excellence, and the attention to details is impressive.

We wish Janhvi Khadak Karki all the very best for their future endeavors.

Sincerely,

Hannan Satopay
Chief Executive Officer

Alhansat Solutions Private Limited

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ACKNOWLEDGEMENT

We believe, “No matter how big or small an endeavor is, we do nothing in vacuum! We do it because of the supporting roles of many others.” Here I would like to express my thanks to all those who contributed in many ways to the success of this Internship study and made it an unforgettable experience for me. Internship is like a bridge between theoretical and practical working. First of all, I would like to thank the supreme power the Almighty God who is obviously the one has always guided me to work on the right path of life.

I am indebted to my External Internship Supervisor *Hanan Satopay* and Internal Supervisor *Prof. Prashant V. Raut*, Department of Computer Science of Sinhgad Institute of Technology, Lonavala. I feel it's a pleasure to be indebted to my both guides for their valuable support, advice, encouragement and constant guidance towards this Internship.

I sincerely thank Dr. S. D. Babar, Head of the Department of Computer Engineering and Principal, Dr. M. S. Gaikwad for all the facilities provided to us in the pursuit of this Internship.

I acknowledge my deep sense of gratitude to my loving parents for being a constant source of inspiration and motivation.

Karki Janhvi Khadak
TE C 05

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Chapter I

COMPANY / ORGANIZATION DETAILS

1. Name of Company / Organization

Alhansat Technologies (OPC) Private Limited

2. Details about Company / Organization

Alhansat Solutions Private Limited is a Private incorporated on 06 January 2023. It is classified as non-govt company and is registered at Registrar of Companies, Mumbai. Its authorized share capital is Rs. 200,000 and its paid-up capital is Rs. 100,000. It is involved in Software publishing, consultancy, and supply [Software publishing includes production, supply, and documentation of ready-made (non-customized) software, operating systems software, business & other applications software, computer games software for all platforms.

Consultancy includes providing the best solution in the form of custom software after analyzing the user's needs and problems. Custom software also includes made-to-order software based on orders from specific users. Also, included are writing of software of any kind following directives of the users; software maintenance, web-page design].

Alhansat Solutions Private Limited's Annual General Meeting (AGM) was last held on N/A and as per records from Ministry of Corporate Affairs (MCA), its balance sheet was last Directors of Alhansat Solutions Private Limited are Hannan Satopay and Suraiya Yasmin Laskar.

3. Address

Floor Grd, Plot -246 C, India Goat Skin Corner, Dharavi Main Road Mumbai Mumbai City – 400017

4. External Supervisor Name, Contact number and Email ID

Supervisor Name: - Hannan Satopay (Chief Executive Officer)

Contact number: - +917021352605

Email ID: - hannan@alhansat.com

ABSTRACT

The area of internship in full stack development is a comprehensive program designed to provide students or beginners with practical knowledge and experience in all aspects of web development, including front-end and back-end development. Full stack development is a broad term that refers to the process of creating web applications from scratch or enhancing existing ones, including building the user interface, integrating databases and server-side logic, and deploying the application.

The area of internship in full stack development involves gaining practical experience in multiple programming languages, frameworks, and technologies. This includes but is not limited to HTML, CSS, JavaScript, Angular, React, Node.js, Express, MongoDB, SQL, and Git.

Front-end development involves building the user interface and user experience (UI/UX) of web applications. This includes creating responsive web pages using HTML, CSS, and JavaScript, and integrating them with front-end frameworks such as Angular and React.

Back-end development involves building the server-side logic of web applications, including managing databases, processing server requests, and implementing server-side scripting using Node.js and Express.

Database management involves designing and implementing databases for web applications using MongoDB, SQL, and other related technologies.

Version control management involves using Git and related tools to manage and track changes in the codebase of web applications, including collaborating with team members.

Overall, the area of internship in full stack development provides students or beginners with practical experience in developing web applications from scratch, integrating databases, implementing server-side logic, and deploying the application. By gaining experience in multiple programming languages, frameworks, and technologies, interns will be better prepared to pursue a career in web development or related fields.

Chapter II

PLAN OF THE INTERNSHIP PROGRAM

- **Duration of the Internship:** 8 Weeks
- **Start Date of Internship:** 12/12/2022
- **End Date of Internship:** 12/02/2023

Chapter III

WEEKLY OVERVIEW OF INTERNSHIP ACTIVITIES

I Week	DATE	DAY	NAME OF THE TOPIC/ MODULE COMPLETED
	12/12/22	Monday	Introduction about Company
	13/12/22	Tuesday	Introduction about Slack Application
	14/12/22	Wednesday	Given login Id pass for slack application
	15/12/22	Thursday	Group has been Distributed
	16/12/22	Friday	Holiday
	17/12/22	Saturday	Holiday

II Week	DATE	DAY	NAME OF THE TOPIC/ MODULE COMPLETED
	19/12/22	Monday	Introduction Session on Figma Design
	20/12/22	Tuesday	Create a Figma Design of any websites
	21/12/22	Wednesday	Time given for completing task
	22/12/22	Thursday	Time given for completing task
	23/12/22	Friday	Figma Design Submission link
	24/12/22	Saturday	Holiday

III Week	DATE	DAY	NAME OF THE TOPIC/ MODULE COMPLETED
	26/12/22	Monday	Introduction Session on Svelte
	27/12/22	Tuesday	Installation and Working of Svelte
	28/12/22	Wednesday	Implementation of Svelte
	29/12/22	Thursday	Session on Svelte Services
	30/12/22	Friday	Holiday
	31/12/22	Saturday	Holiday

IV Week	DATE	DAY	NAME OF THE TOPIC/ MODULE COMPLETED
	02/01/23	Monday	Session on Firebase and Installation
	03/01/23	Tuesday	Session on Firebase Function
	04/01/23	Wednesday	Shared Some Resources HTML5 Snippet
	05/01/23	Thursday	Shared Some Resources CSS Snippet
	06/01/23	Friday	Shared Some Resources JavaScript Snippet
	07/01/23	Saturday	Holiday

5 Week	DATE	DAY	NAME OF THE TOPIC/ MODULE COMPLETED
	09/01/23	Monday	Session on NodeJS
	10/01/23	Tuesday	Quick Tutorial (Instagram)
	11/01/23	Wednesday	Marketing Essentials- I
	12/01/23	Thursday	Marketing Essentials- II
	13/01/23	Friday	Overview of all Revise Session
	14/01/23	Saturday	Holiday

6 Week	DATE	DAY	NAME OF THE TOPIC/ MODULE COMPLETED
	16/01/23	Monday	Task Assigned for all the Group
	17/01/23	Tuesday	Task Assigned for all the Group
	18/01/23	Wednesday	Topic has been given by Trainer
	19/01/23	Thursday	All Session has Completed
	20/01/23	Friday	Holiday
	21/01/23	Saturday	Holiday

7 Week	DATE	DAY	NAME OF THE TOPIC/ MODULE COMPLETED
	23/01/23	Monday	Topic- Image Editor
	24/01/23	Tuesday	Project Working in process
	25/01/23	Wednesday	..
	26/01/23	Thursday	..
	27/01/23	Friday	..
	28/01/23	Saturday	Holiday

8 Week	DATE	DAY	NAME OF THE TOPIC/ MODULE COMPLETED
	30/01/23	Monday	..
	31/01/23	Tuesday	..
	01/02/23	Wednesday	..
	02/02/23	Thursday	..
	03/02/23	Friday	..
	04/02/23	Saturday	Holiday

9 Week	DATE	DAY	NAME OF THE TOPIC/ MODULE COMPLETED
	06/02/23	Monday	Submission Link of Project
	07/02/23	Tuesday	..
	08/02/23	Wednesday	Link opened for LOR
	09/02/23	Thursday	A comprehensive Developer Toolkit launch
	10/02/23	Friday	Uploading all Projects Done by Interns on Developer Toolkit
	11/02/23	Saturday	Holiday
	12/02/23	Sunday	Certificate has been Distributed

Chapter IV

INTRODUCTION

An image-editor using HTML, CSS, and JavaScript is a web-based project that allows users to edit digital images through their web browsers. This project utilizes web technologies to create a user-friendly and flexible image editing tool that can be accessed from any device with an internet connection.

The project involves designing and developing a user interface that allows users to perform a variety of image editing tasks, such as cropping, resizing, adjusting color and contrast, applying filters and effects, and more. The user interface is built using HTML and CSS, while the functionality of the editor is implemented using JavaScript.

The project may also incorporate third-party libraries or APIs to enhance the functionality of the image editor, such as integrating with cloud storage services to allow users to save and share their edited images.

One of the benefits of developing an image-editor using HTML, CSS, and JavaScript is the flexibility and accessibility it provides. Users can access the image editor from any device with a web browser, including desktop computers, laptops, tablets, and smartphones. Additionally, the use of web technologies allows for easy integration with other web-based services and APIs, as well as for seamless sharing and collaboration of edited images.

Developing an image-editor using HTML, CSS, and JavaScript can be a challenging but rewarding project, as it requires a strong understanding of web technologies, user interface design, and image processing algorithms. However, the result is a powerful and flexible image editing tool that can be used by photographers, designers, and other professionals in a variety of industries.

Figma design, Servlets, and Databases are other essential tools that are widely used in web development. Figma design is a user interface design tool that helps create visually appealing and responsive designs. Servlets are Java classes that run on a web server and enable the development of dynamic web applications. Databases, on the other hand, are crucial for storing and retrieving data from web applications.

Overall, internships that provide hands-on experience with these technologies offer an excellent opportunity for aspiring web developers to develop their skills and gain practical experience in the field of web development.

Chapter V

PROBLEM DEFINITION

1. **Title of the project:** Image-Editor
2. **Problem Definition:** Create an image-editor using full stack dev technology.
3. **Aim & Objectives**

The problem statement is to develop an image editor using HTML, CSS, and JavaScript in Visual Studio Code. The image editor should provide basic functionality such as uploading, editing, and saving images. The editor should also allow users to crop, resize, and apply filters to images. The interface should be user-friendly and intuitive, allowing users to easily navigate the editor and perform basic image editing tasks.

The editor should be compatible with various file formats, including JPEG, PNG, and GIF.

- **Objective 1**

The project aims to create an image editor that can be easily integrated into any website or web application, providing users with a simple and intuitive interface that is easy to navigate.

The key goals of this project are:

1. To develop an image editor that allows users to crop images to a specific aspect ratio, enhance image quality, add a range of effects, and blur images with different levels of intensity.
2. To develop a responsive and visually appealing user interface that is easy to navigate and use.
3. To improve the technical skills of developers in web development, UI/UX design, and project management.

By achieving these goals, we aim to provide users with a valuable image editing tool that simplifies the process of basic image editing while also providing developers with a learning opportunity to improve their skills in web development and project management.

- **Objective 2**

The primary goal of this project is to create a reliable, fast, and efficient image editor that can be easily integrated into any website or web application. Additionally, the project should demonstrate the ability to use modern web technologies and design principles to create a high-quality user experience.

Chapter VI

MOTIVATION

The motivation behind developing an image-editor project as an internship is multi-faceted. Firstly, an image-editor is a highly useful and in-demand tool in a variety of industries, including photography, graphic design, and web development. By developing an image-editor using HTML, CSS, and JavaScript, interns can gain practical experience in web development and image processing while creating a valuable tool that can be used by professionals in these industries.

Secondly, developing an image-editor using web technologies is an opportunity to learn about the latest advancements in web development, including responsive design, accessibility, and user experience design. This knowledge can be applied to future projects and can help interns stay up-to-date with the latest trends in web development.

Thirdly, the development of an image-editor using web technologies can benefit society by providing an accessible and flexible tool for individuals and businesses who may not have access to expensive desktop image editing software. By providing a web-based image editing tool, users can edit images on any device with an internet connection, including smartphones and tablets.

Finally, the company can benefit from the internship by having a team of motivated and skilled interns who can bring new ideas and perspectives to the project. By working on a real-world project, interns can gain valuable experience in project management, teamwork, and communication, which can be applied to future professional endeavors.

In summary, the motivation behind developing an image-editor project as an internship is to provide practical experience in web development and image processing, learn about the latest advancements in web technologies, provide a valuable tool for professionals and individuals, and benefit the company by having a team of motivated and skilled interns.

Chapter VII

METHODOLOGICAL DETAILS

a. Requirement Analysis

The following are some of the key requirements that need to be analyzed for the development of the Image Editor tool:

1. User Interface: The Image Editor tool should have a user-friendly interface that is easy to navigate and use.
2. Image Editing Features: The Image Editor tool should include a range of image editing features such as cropping, enhancing, adding effects, and blurring.
3. Compatibility: The Image Editor tool should be compatible with a range of devices and operating systems, including desktops, laptops, tablets, and smartphones. It should also work seamlessly across different web browsers such as Chrome, Firefox, Safari, and Internet Explorer.
4. Performance: The Image Editor tool should be optimized for speed and performance. The tool should load quickly, and the image editing functions should be responsive and efficient.
5. Security: The Image Editor tool should ensure the security and privacy of user data. It should implement security features such as SSL encryption to ensure the secure transfer of data.

b. System architecture of the project / assignment

The system architecture of an image editor built using HTML, CSS, and JavaScript would typically consist of the following components:

1. User Interface (UI): The UI would be responsible for providing an intuitive interface for users to interact with the image editor. This would typically consist of a toolbar with various tools for manipulating the image, a canvas for displaying the image, and various menus for configuring the editor.
2. Image Processing: The image processing component would be responsible for performing various operations on the image such as cropping, resizing, rotating, and applying filters. This component would typically be implemented using JavaScript libraries such as Canvas or WebGL.

3. Storage: The storage component would be responsible for saving the image to the server or local storage. This component would typically be implemented using a backend technology such as PHP, Node.js, or Ruby on Rails.

4. Collaboration: The collaboration component would be responsible for enabling multiple users to work on the same image simultaneously. This would typically be implemented using real-time communication technologies such as WebSocket's or WebRTC.

Overall, the system architecture of an image editor built using HTML, CSS, and JavaScript would be a client-server architecture with the client-side implemented in HTML, CSS, and JavaScript, and the server-side implemented using a backend technology.

c. Software requirements

Editor: VS Code

Running commands: Chrome

Operation System: Windows XP

d. Hardware requirements

Processor: Intel Core Duo 3.0 GHz or more

RAM: 4 GB or More

Hard disk: 512GB or more

Monitor: 15" CRT, or LCD monitor

Keyboard: Normal or Multimedia

Mouse: Compatible mouse

e. Algorithm / Flow Chart

Algorithm:

The following is a high-level algorithm for an Image Editor tool that includes basic tools like crop, enhance, effects, blur, and download image:

1. Retrieve the image to be edited from the user.
2. Load the image into the UI using JavaScript.
3. Provide options for the user to crop the image, change its resolution, change color, adjust contrast, add effects, and blur.
4. When the user selects a tool, use JavaScript to apply the appropriate modification to the image.
5. If the user wants to undo or redo an action, use JavaScript to track and reverse the changes.

6. When the user is satisfied with the modifications, allow them to download the edited image.
7. Save the original image and the edited image to the database, along with any metadata such as the date and time of editing and the user who made the changes.
8. Provide APIs that allow for integration with other web applications and services.
9. Implement security measures such as SSL encryption to ensure the secure transfer of data.
10. Continuously test and improve the Image Editor tool to ensure its usability, functionality, and security.

This algorithm can be further refined and optimized based on specific requirements and technologies used in the development of the Image Editor tool.

Chapter VII

RESULTS

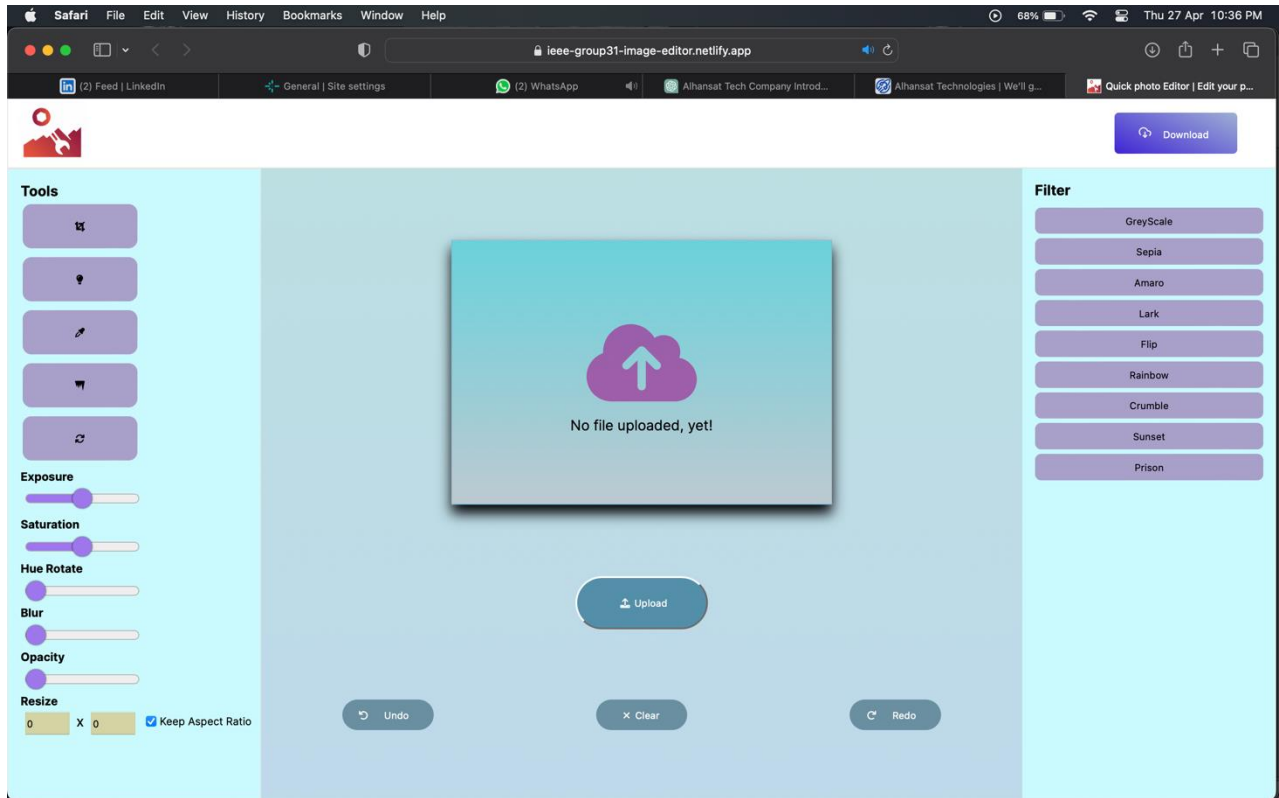


Fig. Front page of Image-Editor

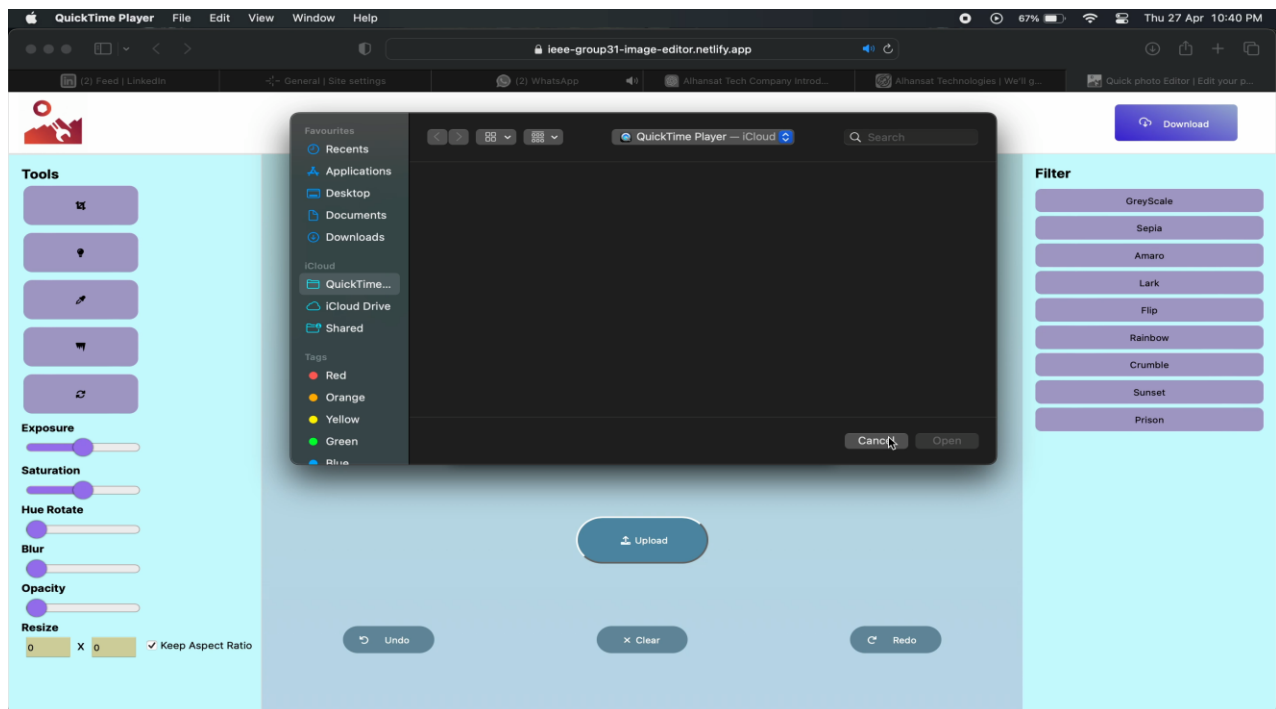


Fig. Image Uploading Page

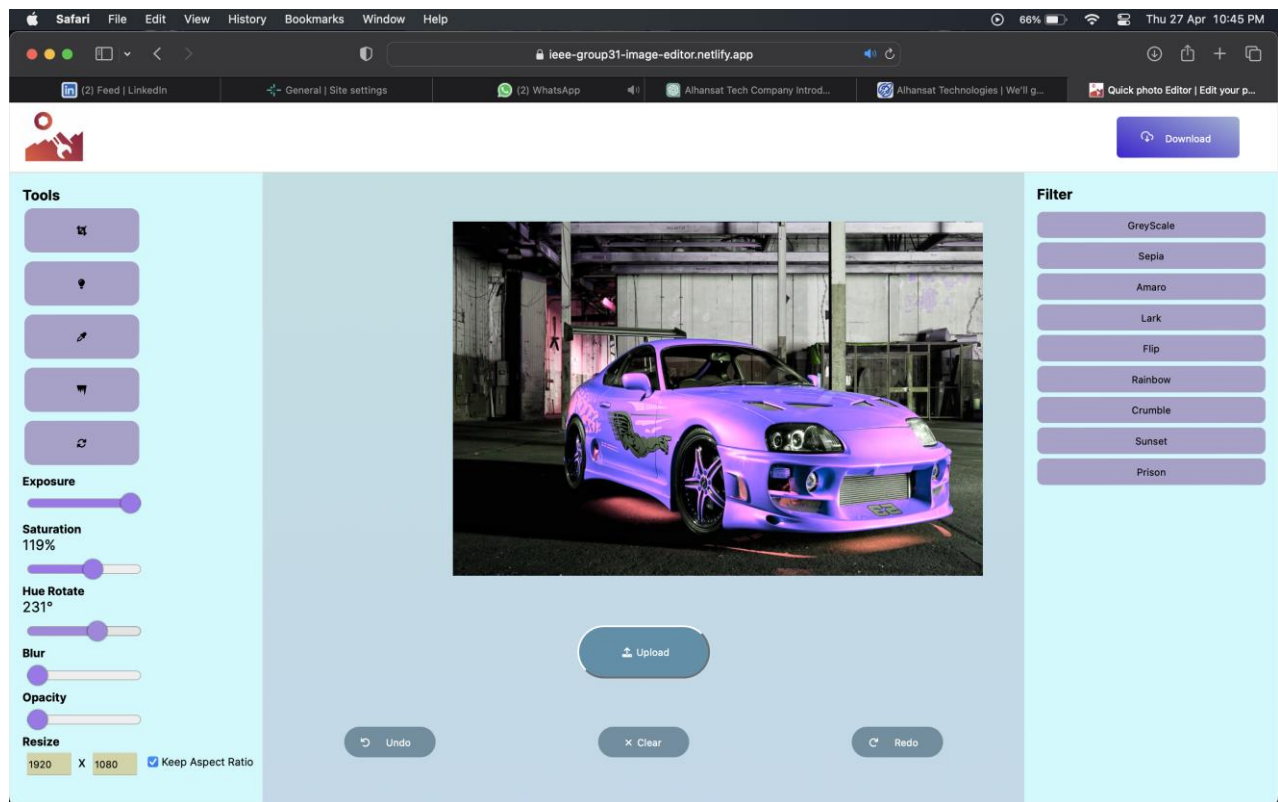


Fig. Colour of the image in the car is change

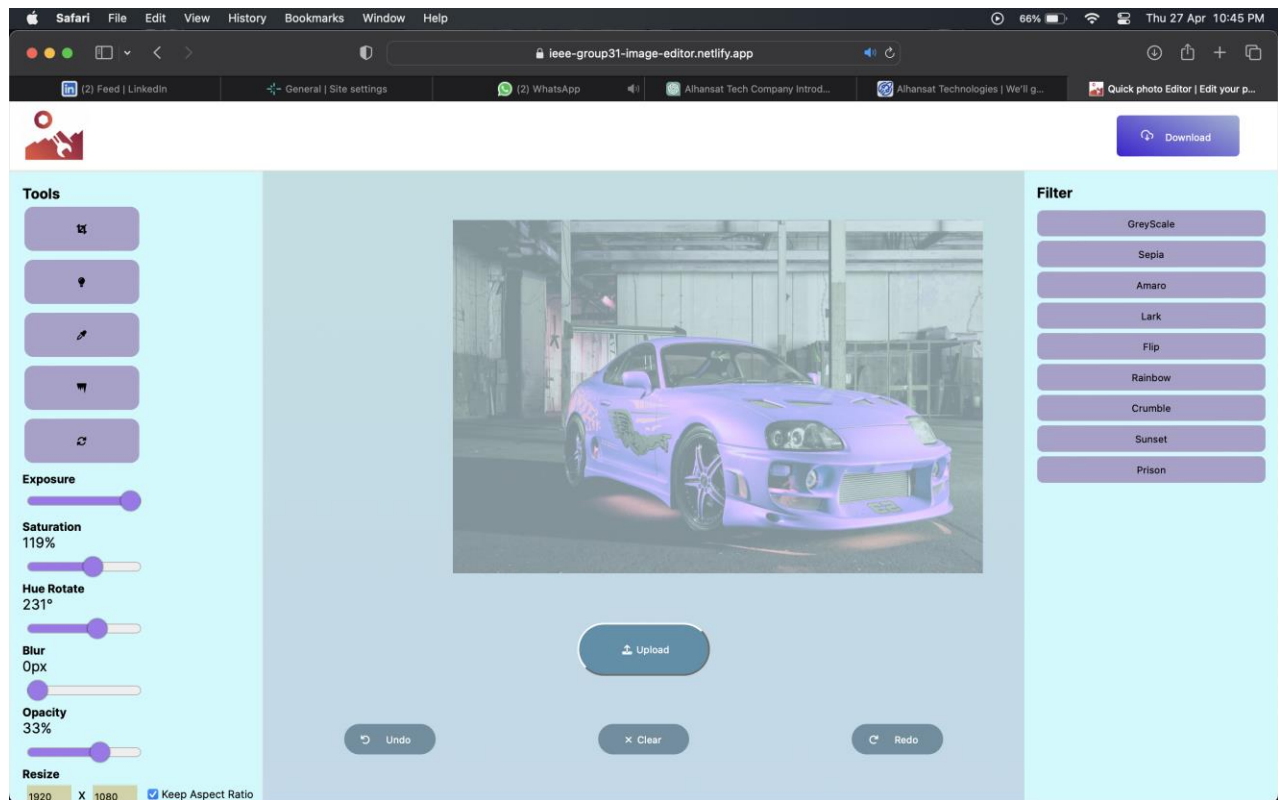


Fig. Image of the Filter has been changed

CONCLUSION

In conclusion, creating an image editor using HTML, CSS, and JavaScript in Visual Studio Code is a complex task that requires careful planning, design, and development. However, the end result is a powerful tool that can enhance users' ability to manipulate and enhance images online.

The methodology used in creating an image editor project includes planning, design, development, testing, deployment, and maintenance, all of which are crucial for the successful creation of a robust and reliable application.

In summary, creating an image editor using HTML, CSS, and JavaScript on Visual Studio Code is a challenging but rewarding task that requires a combination of technical skill and creative vision. With the right approach and methodology, an image editor project can be successfully completed, providing users with a valuable tool for their image editing needs.

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