**TASK 2 DEVELOPMENT REPORT : IMAGE SEARCH ENGINE**

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**Task Description**

*The primary task for this project was to create an image search engine. The development process involved the following steps:*

1. **API Integration**

Approach:

* *I chose the Unsplash API for its extensive collection of high-quality images.*
* *I registered for an API key to access the Unsplash API.*
* *I used JavaScript to make HTTP requests to the API and retrieve image data.*

Challenges Encountered:

* *Learning to use the Unsplash API and understanding its documentation.*
* *Handling API authentication and rate limits.*

Solution:

* *I spent time studying the Unsplash API documentation and experimenting with API requests.*
* *I implemented proper error handling for rate limits and authentication issues.*

1. **User Interface Design**

Approach:

* *I designed a simple and user-friendly web interface using HTML and CSS.*
* *I created a search bar and display area for search results.*

Challenges Encountered:

* *Ensuring a responsive design for different screen sizes.*
* *Making the interface visually appealing.*

Solution:

* *I used CSS media queries to make the interface responsive.*
* *I focused on clean and modern design principles to enhance the visual appeal.*

1. **Search Functionality**

Approach:

* *I implemented a search functionality that allows users to enter keywords.*
* *I used JavaScript to process user input and send API requests*.

Challenges Encountered:

* *Handling user input validation and sanitization.*
* *Managing asynchronous API calls and displaying results.*

Solution:

* *I implemented input validation to prevent malicious input.*
* *I used asynchronous JavaScript (Promises) to handle API requests and display results in real-time.*

**Progress and Status**

*The image search engine project has been successfully completed. Users can enter keywords, and the system retrieves relevant images from Unsplash and displays them in a visually appealing interface.*

**Challenges Overcome**

*Throughout the development process, I encountered several challenges, including learning to use the Unsplash API, handling rate limits, creating a responsive design, and managing asynchronous API calls. To overcome these challenges, I dedicated time to research and experimentation, ensuring that the project progressed smoothly.*

**Conclusion and Recommendations**

*In conclusion, the image search engine project has been a success, and all initial objectives have been met. The integration of the Unsplash API, the user-friendly interface design, and the search functionality are functioning as intended.*