



presents

# Build for Bharat

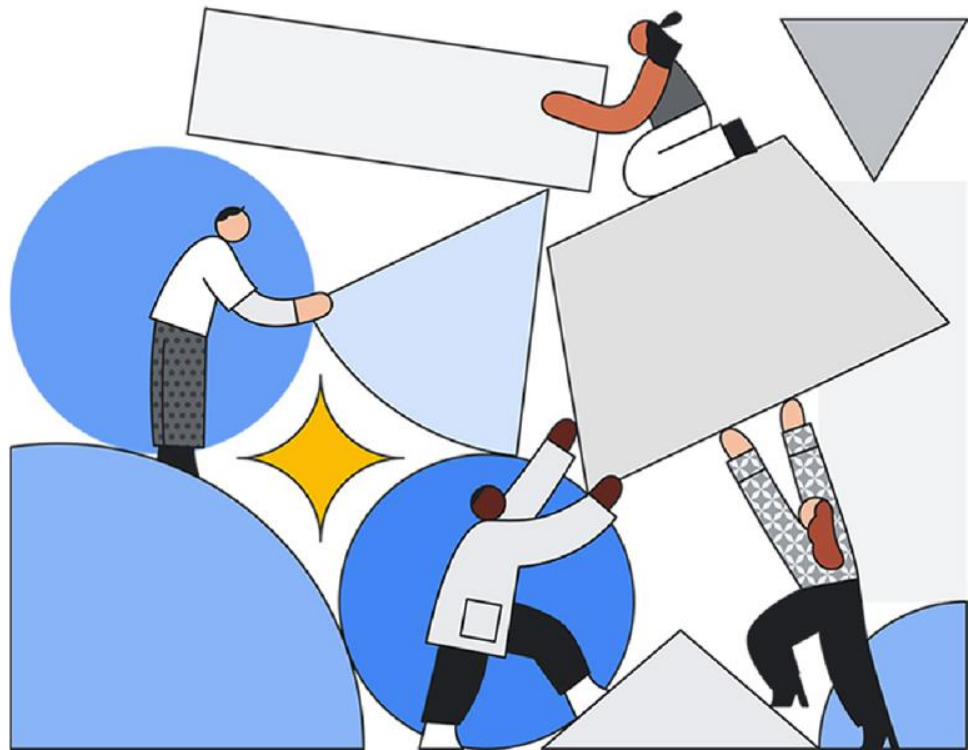
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**Team Name: Aogiri Tree**

**Team Leader Name: Shubhendra Gautam**

**Team Member Names: Vishal Kumar, Avaneesh Rav Vikram, Chandan Kumar**

**Problem Statement Category: Foundational or Scalable Solution**

**Problem Statement: Optimal storage & retrieval in  $m \times n$  sparse matrix**

## Architecture & Design for the innovative solution.

### 1. Modular architecture that provides flexible integration options.

The solution provided is standalone and can be used as an extension of a project. The folder structure is well maintained for easy understanding.

### 1. Tech evaluation would include the following

- Reusability –The python code integrated, can be used as a API for call.
- Extensibility – The solution works for relation between two objects. It can be extended to any duality based systems.
- Scalability – The solution is build to work with large data files. The storage type as file ensures efficient and easy parsing.
- Security –The solution employs secure file passing through multer, a node js library, specifically designed for file uploads.

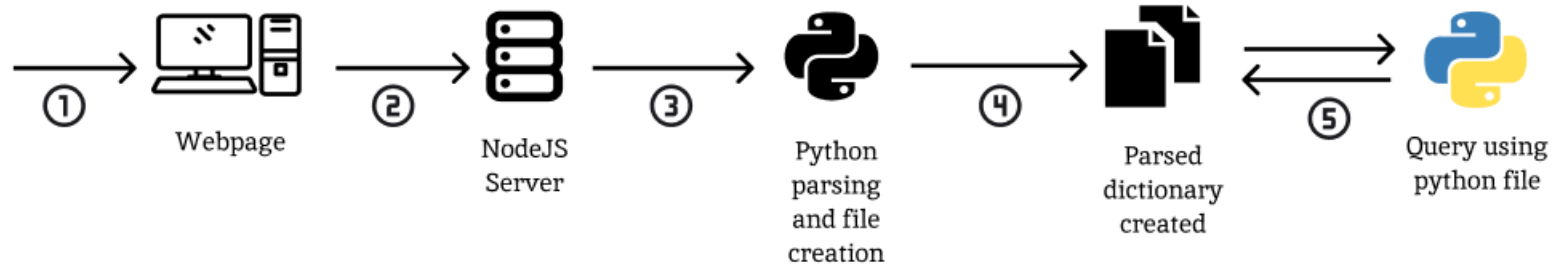
Define customization & deployment options of your proposed solution.

- The solution can be deployed on any popular cloud option. The only requirements are nginx, nodejs, python. Using only basic three softwares in the hosting environment, one can deploy the solution.
- The customization with this project are limited as it is built as a one process solution. The file uploaded is parsed and converted to dictionaries and saved as a new python file. On querying the file one can use the already built up dictionaries for the optimized retrieval of the data

Test cases & data (as applicable) against which the eval criteria can be assessed

- Data file is provided in the GitHub link, with name “generated\_dataset.csv”.
- On the query page for Merchant ID : search for 1, 2, 3 or as shown in the video.
- On the query page for pin code : search for “409889”, or as shown in the video.

## Demonstrate working of the solution to the evaluation team



1. Upload your file on the homepage.
2. The file is sent to a node js server.
3. The node server using python preprocess the file and generate two python dictionaries
4. The dictionaries are saved as a python file.
5. Now a new python code is used for querying the dictionaries multiple times as per user need.

## Important Links:-

- GitHub Public Repository Link : [Click](#)
- Link to test cases and data files :



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# THANK YOU

