

OQSHA - Dhisahai

API details

API end point: <http://57.129.37.39:8989/docs> (can ask IT team to put a domain for this)

API key required - will be shared

API to use to ask questions

API to use is: /query

More details can be found here: <http://57.129.37.39:8989/docs>

Request structure

```
{
  "query": "string",
  "top_k": 5
}
```

Request example

```
{
  "query": "What is Construction Safety Management Cycle?",
  "top_k": 5
}
```

Response example

```
{
  "query": "What is Construction Safety Management Cycle?",
  "answer": "### Construction Safety Management Cycle\n\nThe Construction Safety Management Cycle is a structured approach to managing safety in construction operations. It involves a continuous process that integrates the organization's safety policies, planning, and performance evaluation to ensure a safe working environment.\n\nBased on the provided context (*safety_manual_for_construction_workers.pdf*), the cycle includes the following key components:\n\n1. Safety Policy \n - Establishing the organizational safety policy is the starting point. This policy reflects the management's commitment and strategy towards safety.\n\n2. Organisation & Personnel \n - Defining roles, responsibilities, and accountabilities related to safety within the organization.\n\n3. Planning & Performance Standards \n - Planning is fundamental and forms the basis for other
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management functions. It involves setting safety objectives, hazard prevention measures, and control strategies tailored to the specific construction project.

- Planning also considers changes in technology, materials, methods, legal requirements, and other factors affecting safety.

4. **Measuring Performance** - Monitoring and measuring safety performance to ensure compliance with standards and effectiveness of safety measures.

5. **Reviewing Performance** - Regularly reviewing safety outcomes to identify improvements and implement corrective actions for continuous safety enhancement.

This cycle ensures that safety management is proactive, systematic, and integrated into the construction process, promoting a positive safety culture and reducing workplace accidents.

> *Reference: safety_manual_for_construction_workers.pdf* (Sections on Construction Safety Management and Planning for Safety)",

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    "content": "Construction Safety Management is a structured management approach to managing safety, \ntaking into account the organisation's specific structures and processes related to safety of \noperations, including accountabilities, policies and procedures. Th is begins with setting the \norganisational safety policy. Based on the management's safety policy and strategy, the \nsafety organisation proceeds with planning, organising, staffing, co -coordinating , \ncommunicating, budgeting for safety. \n \n \nFig. 3.1. Construction Sa fety Management Cycle  Safety \nPolicy\nOrganisation \n& \nPersonnel\nPlanning & \nPerformance \nStandardsMeasuring \nPerformanceReviewing \nPerformance\n12 \n Planning for Safety \n \n \n Planning is the most fundamental and the first function of management process \nand other functions rest on it. \n \n Need for planning is increasing because of changes in technology, materials, \nmethods, processes, demands, law, government policy, procedure and \ncompetition.",
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```

manufacturing and very low in construction industries, which \ncould be a reason for high accident rates in construction sites. The main objective of \ndeveloping and implementing safety management is t o improve safety performance which \ngives safe work place for people working in construction industries . \n3.1 Construction Safety Management : \nManagement is defined as conducting or supervising of something especially the executive \nfunctions of planning, organizing, coordinating, directing, controlling and supervising any \nindustrial or business project or activity with responsibility for others. \nConstruction Safety Management is a structured management approach to managing safety, \ntaking into account the organisation's specific structures and processes related to safety of",

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{

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"content": "immediately need to correct the situation when feasible or need to be informed w ith \nmanagement. Management has the responsibility to take adequate precautions, comply \nwith standards, and assure the safety and health of employees. If a job cannot be done \nsafely it should not be done. Management need to provide visible ongoing commitm ent, \nresources, and leadership to assure the implementation of the Occupational Safety \nHealth Management System. All employees need to be provided equally high quality \nsafety and health protection. It's very essential to create a positive safety culture through \nemployee involvement and effective policies and procedures. \nThis construction safety manual explains successful accident -prevention principles and \ntechniques at various construction activities. These techniques may vary according to \nthe size and nature of construction activities. However, the basic principles remain the \nsame. \n4",

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"content": "System is the best defense against workplace injuries. This has five primary elements: \n3 \n Management Commitment and Planning, \n Employee Involvement, \n Worksite Analysis, \n Hazard Prevention and Control, \n Safety and Health Training. \n \n This systematic approach integrates occupational safety and health objectives into the \ncompany's organizational structure. The results of a system

approach include: \n□ An effective system supports the organization's philosophy. \n□ Safety and health policies and goals are clearly communicated. \n□ Accountability for implementing the system is understood and accepted. \n□ Long -term solutions are implemented rather than one -time fixes. \n□ Evaluation of results over time promotes continual improvement. \n□ An effective system positively impacts the company 's bottom line. \n \nDue to the wide scope and definition of construction work, every construction activity and",

```

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    "content": "a given time. One of the best ways to approach planning
for construction safety is to \nwrite down the measures for hazard
prevention (control measures) applicable to the \nparticular project site.
As experienced in a construction site, su b-contracting of a job \nreaches
to several levels. This ensures that good planning can eliminate the causes
of \nmany potential accidents at project site. \nThe specific hazards in
relevant to the construction industry includes: \n□ Demolition Work \n□
Excavation Wor k \n□ Managing the Risk of Falls at Workplaces \n□ Managing
Noise and Preventing Hearing Loss at Work \n□ Preventing Falls from height
work \n□ Confined Spaces \n□ Hazardous Manual Tasks \n \nAll the
Workplace injuries are preventable. An Occupational S afety Health
Management \nSystem is the best defense against workplace injuries. This
has five primary elements: \n3 \n □ Management Commitment and Planning,
\n□ Employee Involvement, \n□ Worksite Analysis,"
    "source": "/app/data/safety_manual_for_construction_workers.pdf",
    "filename": "safety_manual_for_construction_workers.pdf"
  }
]
}

```

Other notes

Flow

1. Since it needs an API Key the oqsha portal will make a request with token to the oqsha backend.
2. OQSHA server will check and request with API key to our dhisahai server.
3. Get the response back and send it to UI.
4. OQSHA server will act as a layer of server and will only do postman job.

Chat history (Optional)

If you guys need to maintain the chat history then you can manage on your end for now. Since you will have context of each user in your database and their chat message. If we try to do it on our end it will be complicated. Also for 1st version I would say no need to maintain it.

Others

- Kindly handle the corner cases like unauthorized, bad request or 500 response from our end.
- No chat history required
- For each session when on that page you can store the question and answer in the UI itself as an array.
- ignore : retrieved_documents and sources for now (these are to show from which document the info is fetched)
- Answer will be in markdown, so use the library to show it: <https://www.npmjs.com/package/ngx-markdown>