

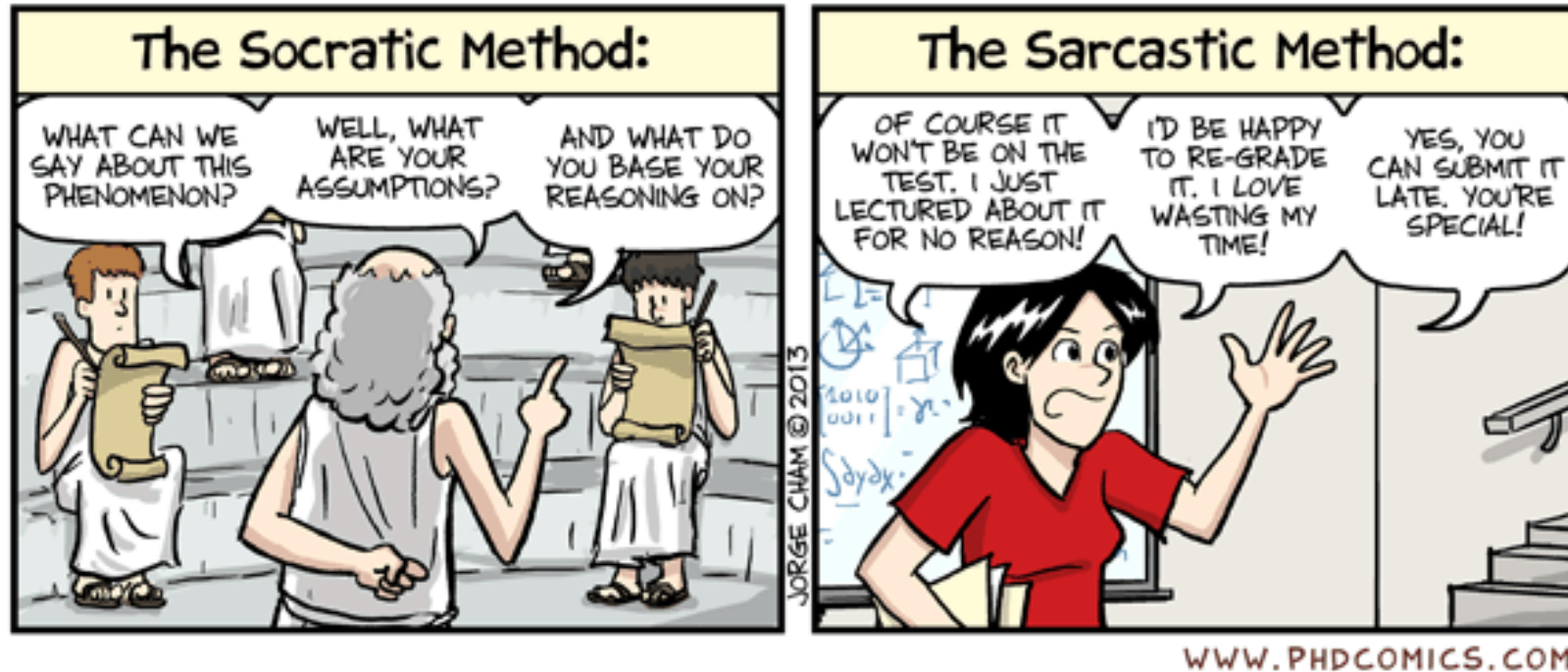


QAPairs Deep Dive

20 JAN 2024

Thane J. Thompson

Teaching Methods



Aka Grumpy Teacher

“The national student-to-school-counselor ratio was 408:1 in 2021–2022” According ASCA,

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Agenda

QA - Current State

QA – Future State / Inspiration

Checklist of QA Design

Code to See – UseState, Accordion Toggle, Filtering

Code to Consider – Recommendation

Conclusion

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Future State – aka Inspiration



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You

What must I do to get accepted to Harvard?



ChatGPT

Getting accepted to Harvard University is extremely competitive, as it is one of the most prestigious institutions in the world. Here are some essential steps you should take to increase your chances of admission:

1. **Academic Excellence:**

- Maintain an exceptional academic record throughout high school. Harvard seeks students with top-notch grades.

2. **Course Selection:**

- Take the most challenging courses available to you, such as Advanced Placement (AP), International Baccalaureate (IB), or honors classes.

3. **Standardized Tests:**

- Prepare for and excel on standardized tests, such as the SAT or ACT. Harvard has been test-optional as of my last knowledge update in 2022, but check the current policy.

4. **Extracurricular Activities:**

- Engage in a diverse range of extracurricular activities, including clubs, sports, community service, and leadership roles↓
- Showcase your passion and commitment in a few activities rather than spreading

Message ChatGPT...



ChatGPT can make mistakes. Consider checking important information.

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






Code to Consider – Recommendation

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QAPairs Design Checklist

Frontend Functionality:

-  1. **User-Friendly Interface:** The frontend provides a user-friendly interface for visitors to access and interact with the QAPs. It includes a clean and responsive design that works well on various devices.
-  2. **Search Functionality:** Users can easily search for specific questions or topics within the QAP database. A search bar allows for quick access to relevant information.
-  3. **Categorization:** QAPs are organized into categories or topics, making it easier for users to navigate and find answers related to their specific interests or needs.
-  4. **Sorting and Filtering:** Users can sort and filter QAPs based on criteria such as relevance, popularity, date, or category. This helps users quickly find the most relevant information.
-  5. **Readability:** QAPs are presented in a clear and easily readable format. They may include text, images, and links for more detailed explanations or related resources.
-  6. **Interactive Features:** Some QAP systems incorporate interactive elements, such as collapsible sections or buttons for expanding answers, enhancing the user experience.
-  7. **Feedback Mechanism:** Users can provide feedback on the usefulness of QAP answers, helping improve the quality and relevance of the content over time.



Required and Complete



Not Required



Required and Not Yet Started



Mission Essential Issues



Required, Started and has issues

Backend Functionality:



1. **Content Management:** The backend includes a content management system (CMS) for adding, editing, and updating QAP entries. Authorized administrators can make changes as needed.



2. **Database Management:** QAPs and related data are stored in a database, allowing for efficient retrieval and management of the content.



3. **Authentication and Authorization:** User roles and permissions are defined to ensure that only authorized personnel can manage and update QAP content.



4. **Analytics and Reporting:** The backend may include analytics tools to track user interactions with the FAQs. This data can help administrators understand which questions are most commonly accessed and identify areas where additional content or improvements are needed.



5. **Integration:** The backend may be integrated with other systems, such as customer support tools or chatbots, to provide a seamless user experience and ensure consistent answers across channels.



6. **Version Control:** A version control system helps track changes to QAPs, allowing administrators to revert to previous versions if necessary and maintain a history of updates.



7. **Security:** Robust security measures are implemented to protect the QAP system from unauthorized access, data breaches, other security threats.



8. **Scalability:** The system is designed to handle a growing database of QAPs and an increasing number of users without compromising performance.



9. **Backup and Recovery:** Regular data backups and a disaster recovery plan are in place to prevent data loss and ensure the availability of QAP content.



10. **APIs and Integration:** The QAP system may offer APIs (Application Programming Interfaces) to allow integration with other applications or websites.

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Code to See

Interactive Features:

React useState x 3:

activeIndex, setActiveIndex for Accordion

allContents, setAllContents to hold returned db object

filteredContents, setFilteredContents to hold filtered db objects to render

Bootstrap: Accordion Container

Accordion Item

Accordion Header

Accordion Button

Accordion Collapse

Accordion Body

JavaScript toggleAccordion function

Categorization:

JavaScript filterByCategory function

Sorting and Filtering:

Buttons call filterByCategory with unique categoryId

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Code to See

```
[
  {
    "id": 0
    , "question": "How do to do long division?"
    , "answer": "Long division problems are step up in a tableau with the divisor separated from the dividend by a parenthesis. The dividend is separated from the quotient or answer by a bar. Here is an example of the tableau setup and follow on calculation:
```

$\begin{array}{r} \textcolor{red}{1}\textcolor{blue}{2}\textcolor{green}{5} \\ 4 \overline{)500} \\ \underline{4} \\ \textcolor{orange}{1}0 \\ \underline{8} \\ \textcolor{teal}{2}0 \\ \underline{20} \\ 0 \end{array}$	(Explanations)
4	$(4 \times \textcolor{red}{1} = 4)$
$\textcolor{orange}{1}0$	$(5 - 4 = \textcolor{orange}{1})$
$\underline{8}$	$(4 \times \textcolor{green}{2} = 8)$
$\textcolor{teal}{2}0$	$(10 - 8 = \textcolor{teal}{2})$
$\underline{20}$	$(4 \times \textcolor{blue}{5} = 20)$
0	$(20 - 20 = 0)$

```
."
  , "category":
    { "id" 2,
      "name" : "Arithmetic"
    }
  , "sortOrder": 1
}
```

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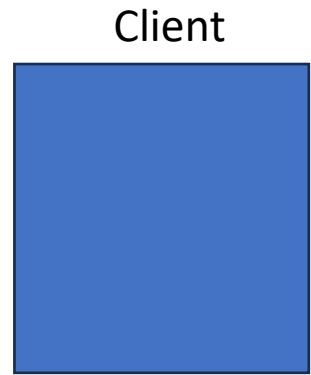
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RAG Code to Consider



Frontend Files:

Function Specific

FaqAccordion.jsx

faqService.js

FaqAdd.jsx

Edited Supporting / Adjacent

App.jsx

publicRoutes.js

PageHeader.js

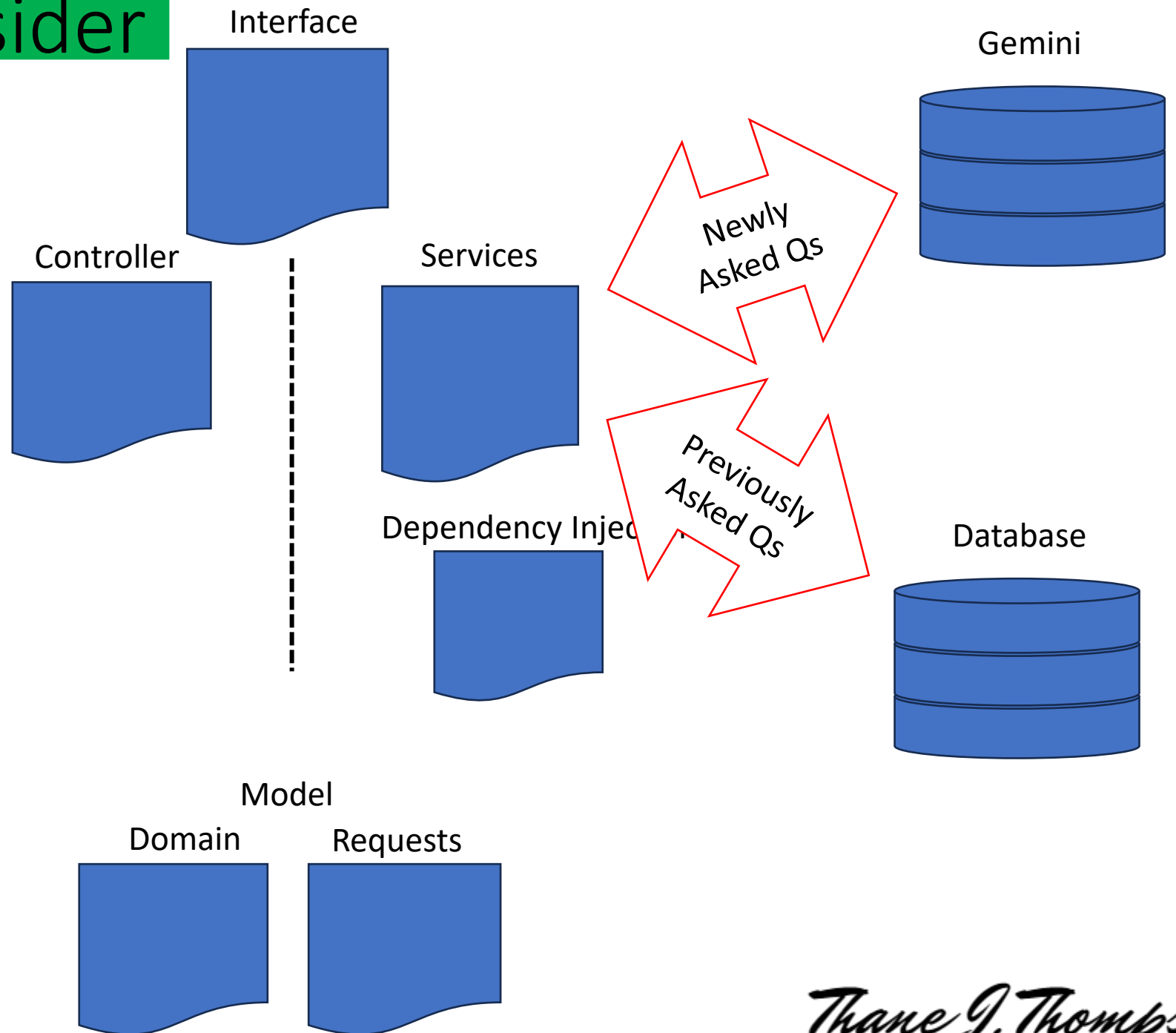
Suspected / Adjacent

Index.html, App.css

Index.js, serviceHelper.js

Assets for PageHeader.js

AND OTHERS!



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Code to Consider

PUT API call to ChatGPT with this Payload Object:

QUESTION via JSON Request Object

```
{
  "messages": [
    {
      "role": "system",
      "content": "You are a helpful assistant"
    },
    {
      "role": "user",
      "content": "What must I do to get into Harvard?"
    }
  ]
}
```

CHATGPT ANSWER via JSON Response Object

```
{
  "id": "chatcmpl-6p9XYPYSTTRi0xEviKjjilqrWU2Ve",
  "object": "chat. Completion",
  "created": 1677649420,
  "model": "gpt-3.5-turbo",
  "usage": {
    "prompt tokens": 4,
    "completion tokens": 41,
    "total tokens": 45
  },
  "choices": [
    {
      "message": {
        "role": "assistant",
        "content": "Getting accepted to Harvard University is extremely competitive, as it is one of the most prestigious institutions in the world. Here are some essential steps you should take to increase your chances of admission:
1. Academic Excellence:
* Maintain an exceptional academic record throughout high school. Harvard seeks students with top-notch grades.
2. Course Selection:
* Take the most challenging courses available to you, such as Advanced Placement (AP), International Baccalaureate (IB), or honors classes..... (....followed by 16 more steps)
        "
      },
      "finish reason": "stop",
      "index": 0
    }
  ]
}
```

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Conclusion

1) Coding Concepts Illustrated

- A. React useState to implement state to control accordion, hold database values, hold filtered values to display
- B. JavaScript Filter
- C. JavaScript Map

2) Design objectives are key and may be mission essential.

3) Accessing Advanced AI appears to be as easy as sending and receiving API payloads. Display to user should be straight forward. The trick will be in middle tier to store QAPs, manage token expense, and ensure safety and security of minors.

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Questions

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