

Day-2 Task Report – AI Question Generation Module

Name: Arya

Task: Start designing LLM prompts using transcript chunks

Status: Completed

Work Summary

- Used real transcript text split into smaller topic-based chunks
 - Applied LLM prompt to generate MCQs using **Gemini 3 Pro**
 - MCQs include difficulty level, correct answer & explanation
 - Validated JSON structure for backend compatibility
 - Output screenshot taken for reference
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Prompt Used

1. Generate 4 MCQs from the transcript chunk below.
 2. Include difficulty level, 4 options, correct answer, and explanation.
 3. Output strictly in clean JSON format.
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Transcript Chunk Used

(from transcript provided by Mahesh)

Currently we store the data in the form of arrays. An array contains similar types of elements.

For example, 4, 2, 90, and 1 are integer type elements. If I want to store floating values, then I must create a separate array where all the elements must be floating values.

An array stores the elements in a contiguous memory location.

Array uses zero-based indexing, which means the first element is stored at index 0.

For example, the 4th element is stored at index 3.

Generated Output

```
[
{
  "question": "Which characteristic defines the type of elements stored in an array?",
  "difficulty": "Easy",
  "options": [
    "Arrays store a mix of integers and strings",
    "Arrays store similar types of elements",
    "Arrays can only store integer values",
    "Arrays store elements based on their file size"
  ],
  "correct_answer": "Arrays store similar types of elements",
  "explanation": "The transcript states that 'An array contains similar types of elements,' meaning if an array is created for integers, it holds integers, and if created for floating values, it holds floating values."
},
{
  "question": "How are array elements arranged within memory?",
  "difficulty": "Medium",
  "options": [
    "In random memory locations",
    "In non-linear linked locations",
    "In contiguous memory locations",
    "In descending memory addresses"
  ],
  "correct_answer": "In contiguous memory locations",
  "explanation": "According to the text, one of the key properties of an array is that it 'stores the elements in a contiguous memory location.'"
},
]
```

```
{
  "question": "In a system using zero-based indexing, what is the index of the first
element?",
  "difficulty": "Easy",
  "options": [
    "1",
    "0",
    "-1",
    "2"
  ],
  "correct_answer": "0",
  "explanation": "The transcript explains that 'Array uses zero-based indexing, which means
the first element is stored at index 0.'"
},
{
  "question": "Based on the transcript, which index is used to fetch the 4th element of an
array?",
  "difficulty": "Medium",
  "options": [
    "Index 4",
    "Index 3",
    "Index 2",
    "Index 0"
  ],
  "correct_answer": "Index 3",
  "explanation": "Because arrays use zero-based indexing, the index is always one less than
the position number. The transcript specifically cites: 'For example, the 4th element is stored
at index 3.'"
}
```

Day-2 Conclusion

Chunk-based MCQ testing successfully completed using real transcript.
Output accuracy and explanation quality improved.

Submitted by

Arya – AI / LLM Content Generation