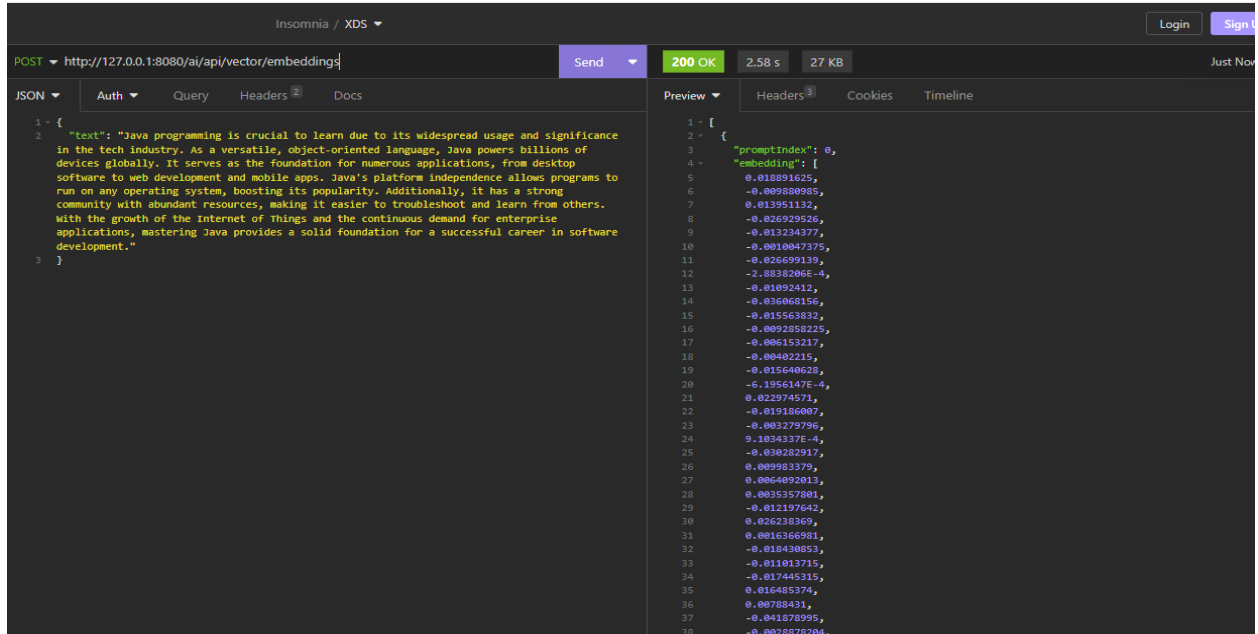


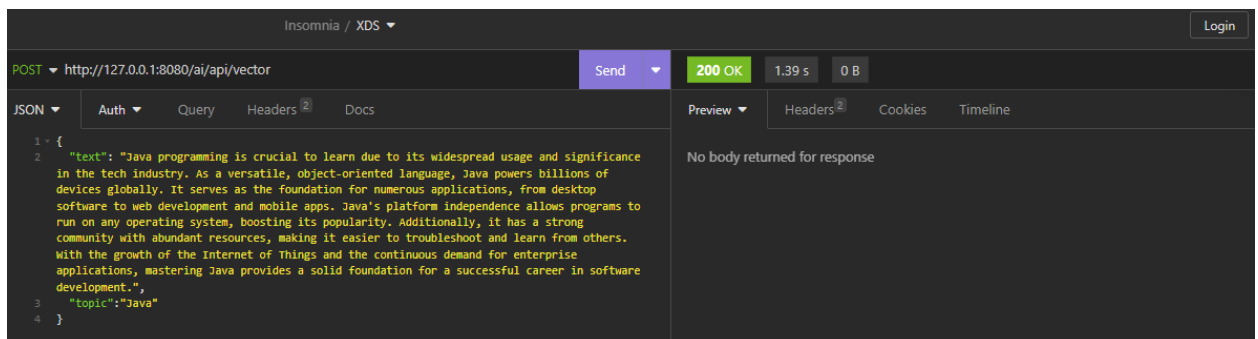
- I. Used Vector Database: Qdrant <https://qdrant.tech/>
- II. Implemented an endpoint to build an embedding from the provided text:



- III. Implemented an endpoint to build and store an embedding from the provided text

Create records into Qdrant DB:

1 Java topic



Qdrant evidence:

localhost6333/dashboard#/collections/demo_collection

google SURA PortableApps.com mastering-algorith... mios EPAM

demo_collection

POINTS INFO SEARCH QUALITY SNAPSHOTS VISUALIZE GRAPH

Find similar by ID or filter by payload key:value pair. Example: name: John Doe, age: 25, id: c0847827-d005-4e46-b328-887f72373d2d , id: 1234567890


Point 1734706385118

Payload:

topic java

Vectors:

Vectors:

Default vector  Length: 1536

2 Python topic

Insomnia / XDS

POST http://127.0.0.1:8080/ai/api/vector Send 200 OK 811 ms 0 B

JSON Auth Query Headers 2 Docs Preview Headers 2 Cookies Timeline

```
1 {
2   "text": "Python programming is gaining immense popularity in the world of technology and software development. Known for its simplicity and readability, Python is a versatile, high-level programming language that has become a go-to choice for many developers. It offers a wide range of libraries and frameworks, making it suitable for various applications such as web development, data analysis, artificial intelligence, and more. One of the key advantages of Python is its ease of learning. Its clean syntax and extensive documentation make it beginner-friendly, allowing newcomers to quickly grasp the fundamentals of programming. Python's simplicity, coupled with its vast community support, ensures that developers can find solutions to any coding challenges they may encounter. Python's versatility extends to its cross-platform compatibility, enabling developers to write code that can run seamlessly on different operating systems. Additionally, its integration capabilities with other languages make it a valuable tool in heterogeneous software environments. Furthermore, Python's vast ecosystem of libraries and frameworks, such as Django, Pandas, and TensorFlow, considerably accelerates development time by providing pre-built modules for various functionalities. This allows developers to focus on solving specific problems rather than reinventing the wheel. Python's popularity also stems from its significant role in the field of data science. With libraries like NumPy and SciPy, Python provides powerful tools for data manipulation, analysis, and visualization. The simplicity and expressiveness of the language, combined with these libraries, enable data scientists to efficiently work with large datasets and derive valuable insights. In addition to being efficient and powerful, Python promotes code reusability and maintainability. Its emphasis on clean and readable code encourages developers to write organized and structured programs, making it easier for teams to collaborate and maintain codebases over time. Overall, Python's versatility, simplicity, and extensive libraries make it an excellent choice for both beginners and experienced developers. Its ability to handle a wide range of applications, from web development to machine learning, positions Python as a valuable and relevant programming language in today's ever-evolving tech landscape., with their mesmerizing charm, hold an undeniable allure that continues to draw travelers from around the world.",
3   "topic": "python"
4 }
```

No body returned for response

Qdrant evidence:

Point 1734706481397

Payload:

topic

python

Vectors:

Vectors:

Default vector

Length: 1536

OPEN GRAPH

FIND SIMILAR

3 Tourism topic (Cartagena colombia)

Insomnia / XDS

POST http://127.0.0.1:8080/ai/api/vector

Send200 OK837 ms0 B

JSONAuthQueryHeaders2Docs

1- {
2 "text": "Cartagena, Colombia, is a vibrant and enchanting city filled with historical charm and captivating beauty. Located on the Caribbean coast, Cartagena is renowned for its colonial architecture, colorful streets, and rich cultural heritage. The city's well-preserved historic center, known as the walled city, transports visitors back in time with its cobblestone streets, stunning plazas, and majestic churches. Beyond its historical allure, Cartagena offers pristine beaches, crystal-clear waters, and a thriving culinary scene. Whether indulging in mouthwatering seafood dishes, exploring the vibrant local markets, or dancing to the mesmerizing rhythms of salsa, Cartagena never fails to captivate travelers with its warmth, culture, and exquisite landscapes, making it an unforgettable destination in Colombia."
3 "topic": "Tourism"
4 }

PreviewHeaders2CookiesTimeline

No body returned for response

Qdrant evidence:

Point 1734706627835

Payload:

topic

Tourism

Vectors:

Vectors:

Default vector

Length: 1536

OPEN GRAPH

FIND SIMILAR

4. Europe topic

Insomnia / XDS

POST http://127.0.0.1:8080/ai/api/vector

Send

200 OK864 ms0 B

JSONAuthQueryHeaders2Docs

PreviewHeaders2CookiesTimeline

```
1 {
2   "text": "Europe, with its diverse coastlines, is blessed with an intriguing and
   breathtaking seascape. The seas of Europe, such as the Mediterranean, the North Sea, and the
   Atlantic Ocean, offer an array of natural wonders and captivating experiences. From the
   sparkling turquoise waters of the Greek islands to the dramatic cliffs of the Norwegian
   fjords, the European seas are a treat for the senses. These seas not only provide stunning
   beauty but also serve as a hub for various activities, including sailing, diving, and
   fishing. Moreover, they play a central role in Europe's economy, serving as important trade
   routes and supporting industries like tourism and shipping. The seas of Europe, with their
   mesmerizing charm, hold an undeniable allure that continues to draw travelers from around
   the world.",
3   "topic": "Europe"
4 }
```

No body returned for response

Qdrant evidence

Point 1734706712435

Payload:

topicEurope

Vectors:

Vectors:

Default vectorLength: 1536

OPEN GRAPHFIND SIMILAR

IV. Search for Closest Embeddings

You can see closest result based on input prompt, look at the "payloadKey": "topic" and "payloadValue" that represent what the search engine does/take to get related embeddings

Insomnia / XDS

POST http://localhost:8080/ai/api/vector/search

Send

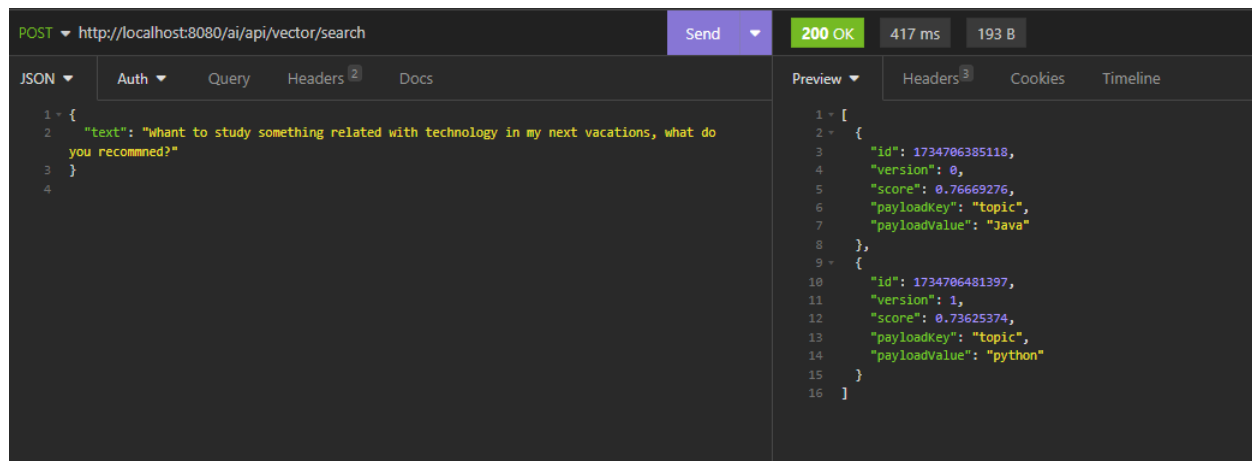
200 OK667 ms194 B

JSONAuthQueryHeaders2Docs

PreviewHeaders3CookiesTimeline

```
1 {
2   "text": "I'm thinking in traveling next december, what places do you recommend to visit"
3 }
4
```

```
1 [
2   {
3     "id": 1734706627835,
4     "version": 2,
5     "score": 0.7591558,
6     "payloadKey": "topic",
7     "payloadValue": "Tourism"
8   },
9   {
10    "id": 1734706712435,
11    "version": 3,
12    "score": 0.7441026,
13    "payloadKey": "topic",
14    "payloadValue": "Europe"
15  }
16 ]
```



V. Functionality Testing

- a. ? Application runs without errors (15%)
- b. ? Responses are generated correctly and are relevant to the prompts (15%)