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**WEB 335 Introduction to NoSQL**

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## Discussion 3.1 – Describing and API with an API Description Format

### **What is an API?**

In simple words, an API acts as a bridge between two different software systems, enabling them to exchange data and functionalities. For instance, when you use an app on your phone to book a taxi, the app uses an API to communicate with the taxi service's software. APIs are essential tools for developers to create software that communicates with other software.

### **How to identify its goals from the consumer's perspective?**

When identifying an API's goals from a consumer's perspective, we need to focus on the specific problem or task that the API is designed to solve. For instance, an API designed to fetch data from a database would have a different set of goals than an API designed to process payments. So, it is essential to understand the consumer's requirements and objectives before designing an API.

### **How to transpose them into a programmable representation?**

To transpose the API's goals into a programmable representation, we need to create a detailed technical specification that outlines how the API will work. This includes the API's endpoints, parameters, request and response formats, authentication mechanisms, and error handling. We also need to consider the programming language that the API will be built with and the type of data it will handle.

### **How to formally describe the programmable representation using OAS?**

OAS or OpenAPI Specification is a standard format for describing RESTful APIs, which makes it easier for developers to understand and use the API. To do this we need to:

1. Define the data models.
2. Define the endpoints.

3. Define the request and response objects.
4. Define security requirements.
5. Define additional details.

## References

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