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*[Document Subtitle]*

# Question 1 : Software architecture analysis (20 points)

## !. Identify each package involved in Elasticsearch (3 points)

* Main/java/org/elasticsearch/search/aggregations
* Main/java/org/elasticsearch/analysis/common
* Main/java/org/elasticsearch/geo
* Main/java/org/elasticsearch/ingest/common
* Main/java/org/elasticsearch/ingest/geoip
* Main/java/org/elasticsearch/ingest/useragent
* Main/java/org/elasticsearch/kibana
* Main/java/org/elasticsearch/script/expression
* Main/java/org/elasticsearch/script/mustache
* Main/java/org/elasticsearch/painless
* Main/java/org/elasticsearch/index
* Main/java/org/elasticsearch/join
* Main/java/org/elasticsearch/percolator
* Main/java/org/elasticsearch/index/rankeval
* Main/java/org/elasticsearch/index/reindex
* Main/java/org/elasticsearch/common/blobstore/url
* Main/java/org/elasticsearch/system
* Main/java/org/elasticsearch/http/netty4
* Client
* Libs
* Modules
* Rest-api-spec
* Server

## II. By referring to the styles of architecture in the course, identify the architectural style(s) for the implementation of the system

The Elasticsearch system is a REST software. We can notify that first because it’s a web service. Then we have the client-server architecture built inside the system. Moreover, elasticsearch supports the http methods such as « get », « put », « post », « delete ». Most of his data use the Json format, so it’s also a clue showing it’s a REST service.

## III. By referring to the standard organization pattern as per the employed style(s), identify the role of each package in the architecture

REST Client: *Client*, it represents the client requesting the resources needed to the server through the REST API.

REST Server: *Server*, it represents the server of the system

REST API: *Libs, Modules, Rest-api-spec*, they represents the requests, the answers exchanged between the client and server, such as the http requests, http responses and status codes

**Serveur**

Diagram

Description automatically generated

**Client**

**Libs**

**Modules**

**REST-API-SPEC**

**BuildSrc**

This is a diagram of a REST architecture. We adapted the diagram by corresponding the component to the Elasticsearch’s packages.