

Chapter-5

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SOA and RESTful Web Services

Resource - Oriented Architecture (ROA) :-

→ ROA is an architecture based oriented to resource.

OR ROA is an architecture based upon the resources concept of resources.

→ Concepts and Properties of ROA :-

① Resource provider :-

→ Server that provides resource is called resource provider

→ eg:- AWS (Amazon web services), & Microsoft Azure, etc.

② Resource :-

→ Anything that can be stored in a computer, like documents or object data.

→ Eg:- web pages, & document, data, etc.

③ Resource representation :-

→ Rep Useful information about the current state of a resource.

→ ~~eg:-~~

④ Resource link :-

→ link to another representation of the same or another resource.

→ eg:- Watching videos in Youtube. (enter video ^{topic in} dhasai videos).

Resource-Oriented Architecture Analysis and Design

- ① Designing Read-Only Resource-Oriented Services.
- ② Designing Read/Write Resource-Oriented Services.

① Designing Read-Only Resource-Oriented Services

→ Following steps are to be done to design read-only resource-oriented services:

① Figure out the data set:

- What data are we exposing when building?

② Split the data set into resources:

- How to expose data set as HTTP resource?
↳ with hypermedia link.

③ For each kind resource:

① Name the resources with ~~URI~~ URIs

- Why should server operate in this place ^(map) instead of that place?

↳ www.maps.example.com/

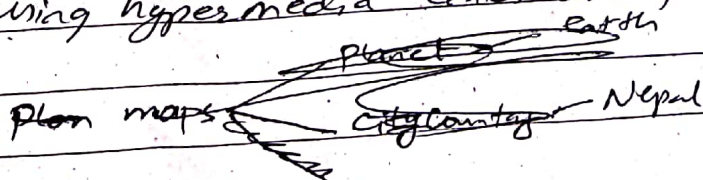
② Expose the subset of uniform interface

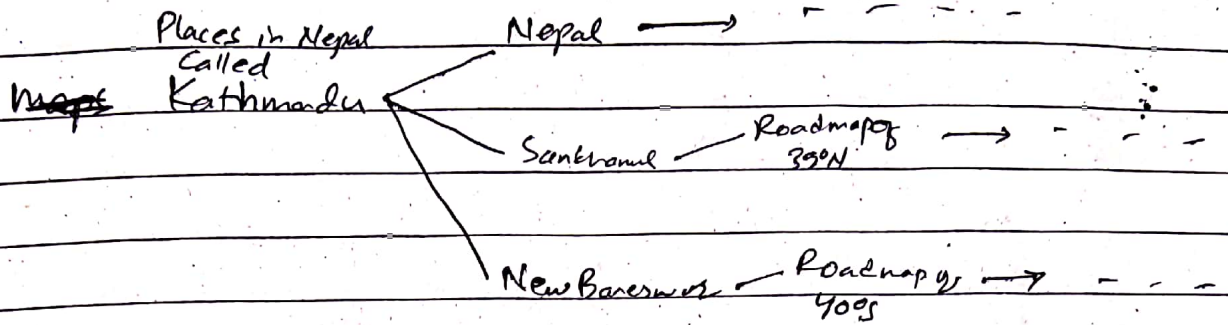
↳ www.maps.example.com/ ^{Parent} / ~~Earth~~ / Child

③ Design the representation(s) accepted by client.

④ Design the representation(s) accepted by server.

⑤ Integrate this resource in to existing resources, using hypermedia links and forms





- (i) Consider the typical course of events: what is supposed to happen?
- (ii) Consider error conditions: what might go wrong?

S.2.2# Designing Read/Write Resource-Oriented Services (Note on xasinto)