

Query Operators

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An Ed-Fi REST API should support searching capabilities with the possible use of selectors, paging, and views. These are discussed below.

Search

An Ed-Fi REST API *should* support querying capabilities when searching a collection of Resources. Query operators are applied to the query string using the following format: `{collectionURI}?{propertyName}{operator}{value}`. Currently, the equals operator is the only operator specified. Other operators (>, <, 'like', 'and', 'or', etc.) may be implemented.

Table 4. Equals Operator, the Only Operator Specified for Searching a Collection of Resources

Operator	Description
=	Equality

For example, to search all available Students having the first name "John" as an exact match, a *{propertyName}={value}* formulation is used (as shown above):

```
https://api.example.com/v3/ed-fi/students?firstName=john
```

Selectors

Selectors allow application developers to be more selective about how much data is returned in the resource representations. Implementation of selectors in an Ed-Fi REST API is optional *should*.

Table 5. Selectors Allow Increased Selectivity in the Data that is Returned

Parameter	Description
fields	Limits the response to the fields listed.

For example, to retrieve only a Student's first and last names:

```
https://api.example.com/v1/students/{id}?fields=firstName,lastSurname
```

In addition, the fields selector *should* be implemented to allow for deep selection by allowing for properties on (sub-)objects within the API resources to also be specified using parentheses to indicate the properties on that object to provide, following this example:

```
/students?fields=firstName,addresses(latitude,longitude)
```

This query string value would return the first name and the address collection, but only provide the latitude and longitude properties on that address collection.

Paging

Paging is a mechanism that restricts the number of results returned by an operation and has proven critical to the efficient usage of Ed-Fi APIs. The limit parameter *must* be supported in the query string and allow the client to set the maximum number of records to return. If no value is supplied, the limit parameter *should* default to 25.

The offset parameter *must* be available to the client to specify how many records to skip when getting the result set. The value for offset *should* default to 0.

When multiple records are being returned, the total count of all records *should be* returned, as part of the HTTP header information.

For example, to get the first name and last name of a collection of available Students from positions 31 to 40:

API Guidelines Contents

Find out more about the Ed-Fi API Design & Implementation Guidelines:

```
https://api.example.com/v1/students?fields=firstName,  
lastName&limit=10&offset=30
```