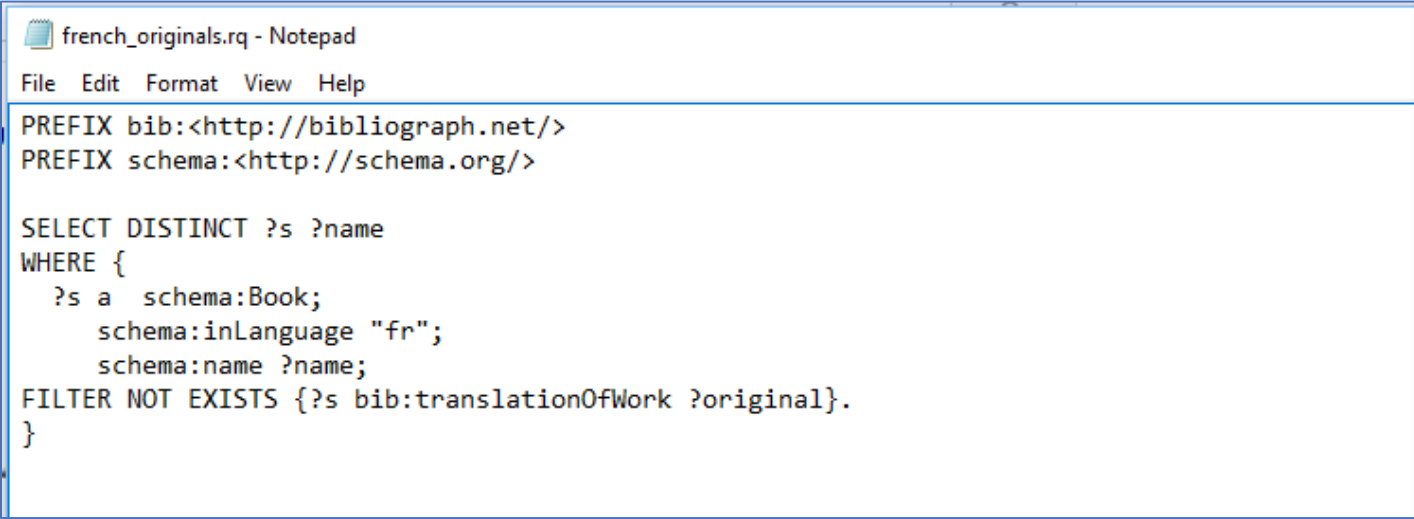


SIMPLE QUERY #3 – NEGATION USING NOT EXISTS AND MINUS

What if, on the hand, you had wanted to write a query specifically to get the names of French books which were *not translations* of works in other languages (i.e., works originally written in French)? There are actually two ways to do this, both of which fall under the broader topic of **NEGATION**.

The first involves thinking of a condition to be met, then using that condition to *return only those results that do not meet the condition*. It may seem counter-intuitive, but it works. In the query below (**Figure 17**), you **FILTER** using the keywords **NOT EXISTS** in order to return *only those resources* that do not have a triple statement attached to them which declares them to be a translation of another work.

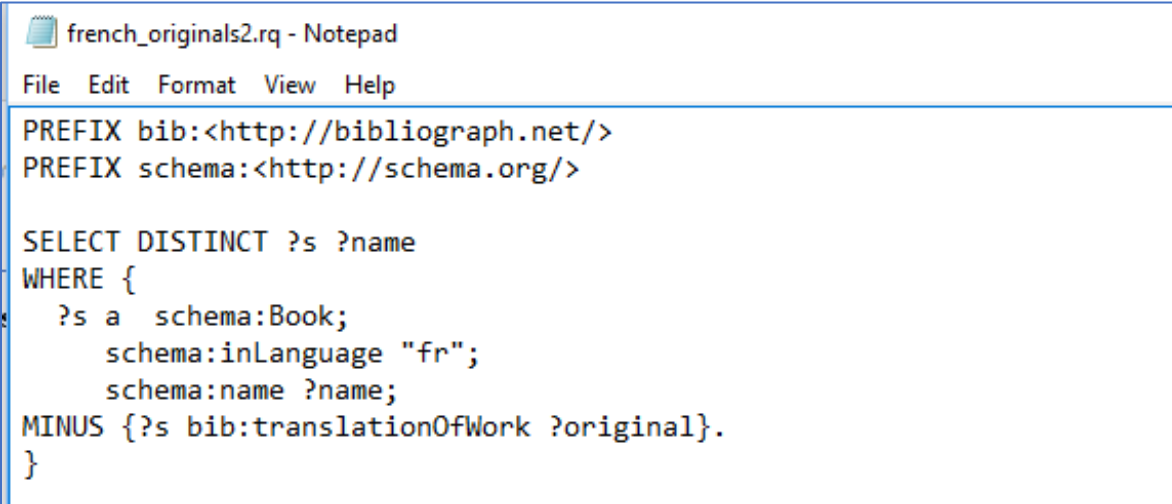
A screenshot of a Notepad window titled "french_originals.rq - Notepad". The window contains a SPARQL query. The query starts with two PREFIX statements: "PREFIX bib:<http://bibliograph.net/>" and "PREFIX schema:<http://schema.org/>". The main query is "SELECT DISTINCT ?s ?name" followed by a "WHERE {" block. Inside the "WHERE {" block, there are three lines: "?s a schema:Book;", "schema:inLanguage 'fr';", and "schema:name ?name;". Below the "WHERE {" block is a "FILTER NOT EXISTS {" block containing the line "{?s bib:translationOfWork ?original}.". The "FILTER NOT EXISTS {" block is closed with a "}" character. The Notepad window has a menu bar with "File", "Edit", "Format", "View", and "Help".

```
french_originals.rq - Notepad
File Edit Format View Help
PREFIX bib:<http://bibliograph.net/>
PREFIX schema:<http://schema.org/>

SELECT DISTINCT ?s ?name
WHERE {
  ?s a schema:Book;
    schema:inLanguage "fr";
    schema:name ?name;
FILTER NOT EXISTS {?s bib:translationOfWork ?original}.
}
```

Figure 17: SPARQL query using the NOT EXISTS form of NEGATION

Alternatively, the **MINUS** keyword can be used to achieve the same purpose. In the following query (**Figure 18**), the first three statements are evaluated, then the statement inside the **MINUS** is evaluated, and the results of the latter are removed from the results set. It should be noted that, in some cases (although not the one in this example), the two approaches *can produce different results*, so be careful when using **NEGATION**. It can become tricky because the two approaches involve different ways of **BINDING** variables, a more advanced topic.

A screenshot of a Notepad window titled "french_originals2.rq - Notepad". The window contains a SPARQL query. The query starts with two PREFIX statements: "PREFIX bib:<http://bibliograph.net/>" and "PREFIX schema:<http://schema.org/>". The main query is "SELECT DISTINCT ?s ?name" followed by a WHERE clause containing three conditions: "?s a schema:Book;", "schema:inLanguage 'fr';", and "schema:name ?name;". A MINUS clause follows, containing the condition "?s bib:translationOfWork ?original.". The query ends with a closing brace "}".

```
french_originals2.rq - Notepad
File Edit Format View Help
PREFIX bib:<http://bibliograph.net/>
PREFIX schema:<http://schema.org/>

SELECT DISTINCT ?s ?name
WHERE {
  ?s a schema:Book;
    schema:inLanguage "fr";
    schema:name ?name;
MINUS {?s bib:translationOfWork ?original}.
}
```

Figure 18: SPARQL query using the MINUS form of NEGATION