

Pseudo-code:

A function *intersection* takes two arrays *a* and *b* as arguments, wherein:

An integer *i* equals 0.

An integer *j* also equals 0.

An empty array is called *q*

While *i* is less than the length of *a* or *j* is less than the length of *b*:

 If member *i* of *a* is less than member *j* of *b*:

 Increment *i*.

 Otherwise, if member *i* of *a* is greater than member *j* of *b*:

 Increment *j*.

 Otherwise:

 Increment *i* and *j*.

 Push the value of member *j* of *b* to *q*.

Return *q*.

Big Oh

The big Oh notation for this function is $O(m+n)$ where *m* and *n* are the lengths of the two arrays *a* and *b*, respectively. We know that this is true because in order to get the intersection we will need to execute the task as many times as the length of *a* and *b* combined to see if any of the array elements are equal to one another.