# Finding Candidate Keys

Here is a simple method to find candidate keys from a given set of functional dependencies

## Steps

1. Find attributes that are neither on the left nor the right side

2. Find attributes that are only on the right side

3. Find attributes that are only on the left side

4. Combine the attributes on step 1 and 3

## First Example

Let’s do it with the below example - the attributes are J, A, S, O, N

Functional Dependencies:

LHS -> RHS

JA -> O

ASO -> N

Steps:

1. Find attributes that are neither on the left nor the right side

>(none)

2. Find attributes that are only on the right side

> Only one attribute: N

3. Find attributes that are only on the left side

> 3 attributes: JAS

4. Combine the attributes on step 1 and 3

> Since step 1 has no attributes, it’s just the attribute JAS

> JAS is now a set of candidate keys.

## Second example

Attributes: ABCDEFG

Functional Dependencies:

AB -> F AD -> E F -> G

Steps:

1. Find attributes that are neither on the left nor the right side

> One attribute: C

2. Find attributes that are only on the right side

> Two attributes: E,G

3. Find attributes that are only on the left side

> Three attributes: A,B,D

4. Combine the attributes on step 1 and 3

> Four total candidate keys: A,B,C,D