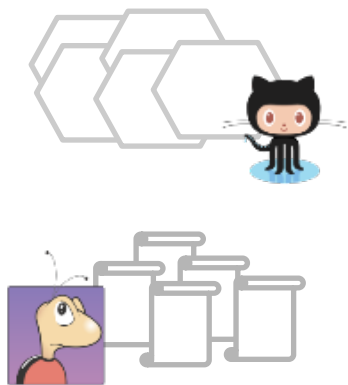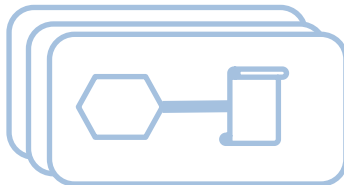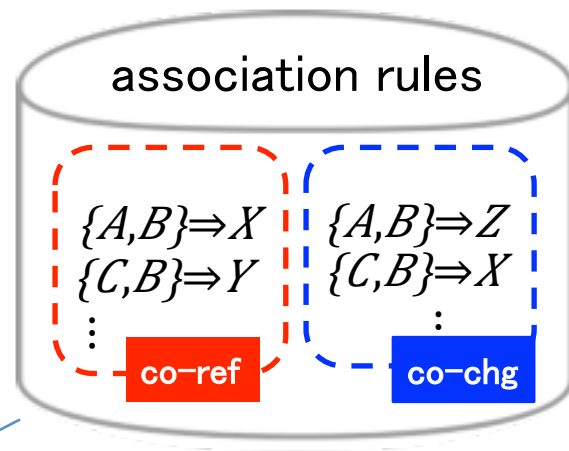1) Obtaining revision history and interaction history
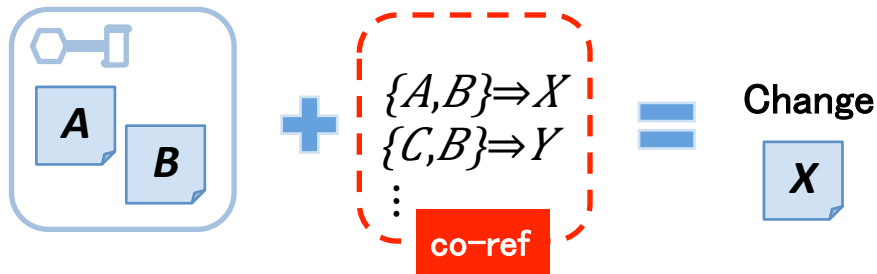
2) Concatenating two histories

3) Extracting assoc. rules

association rules

$\{A,B\} \Rightarrow X$
$\{C,B\} \Rightarrow Y$
⋮
co-ref

$\{A,B\} \Rightarrow Z$
$\{C,B\} \Rightarrow X$
⋮
co-chg

4) Perform change recommendation

A B

$+$

$\{A,B\} \Rightarrow X$
$\{C,B\} \Rightarrow Y$
⋮
co-ref

$=$

Change

X

5) Calculating metrics

MRR
Recall