

# ComS 363

## Homework 2

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1)

(a) A, C, and D should not be used as key, as each has duplicate values in their respective columns.

B should be used as key as it is the only column without duplicate values.

(b) All unique values in C are accompanied by their own corresponding unique values in D, so the dependencet is satisfied.

$[3 \rightarrow 4], [8 \rightarrow 5]$

(c) All unique values in C are **not** accompanied by their own corresponding unique values in B, so the dependencet is **not** satisfied.

$[8 \rightarrow 3], [8 \rightarrow 7]$

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2)

(a)  $AG \rightarrow B \Rightarrow BBB \rightarrow BBCD \Rightarrow BBCDD \sim > BDCBD \rightarrow BDCE \rightarrow BDF$

(b)  $\{B\}^+ = \{B, CD, CE, F\}$

(c)