Properties of Inverse of a matrix

If A is a non-singular matrix, then

$AB = AC \Rightarrow B = C$

Proof : $AB = AC$

$\Rightarrow AB - AC = 0 \Rightarrow A(B - C) = 0$

Since A is non singular

$\Rightarrow (B - C) = 0$ (has to be null)

$\Rightarrow B = C$