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maximal condition

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Synonym	ascending chain condition

A group is said to satisfy the *maximal condition* if every strictly ascending chain of subgroups
$$G_1 \subset G_2 \subset G_3 \subset \cdots$$
is finite.

This is also called the *ascending chain condition.*

A group satisfies the maximal condition if and only if the group and all its subgroups are finitely generated.

Similar properties are useful in other classes of algebraic structures: see for example the Noetherian condition for rings and modules.