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Laxmi K Chataut* (lkchataut@crimson.ua.edu). *Groups with the weak minimal condition on non-permutable subgroups.* Preliminary report.

Let H be a subgroup of a group G . Then H said to be *permutable* if it permutes with every subgroup of G , that is, $HK = KH$ for every subgroup K of G . Let \mathcal{P} be a subgroup theoretical property or class of groups, then $\bar{\mathcal{P}}$ is the class of all groups that either are not- \mathcal{P} groups or are trivial. A group G is said to satisfy the *weak minimal condition on \mathcal{P} -subgroups* (denoted by $\text{min-}\infty\text{-}\mathcal{P}$) if for every descending chain $H_1 > H_2 > H_3 > \cdots$ of \mathcal{P} subgroups of G , $|H_i : H_{i+1}|$ is infinite for only finitely many i . Thus, for example, on letting \mathcal{P} denotes the class of permutable subgroups, we may speak of groups satisfy $\text{min-}\infty\text{-}\bar{\mathcal{P}}$, the weak minimal condition on non-permutable subgroups. Groups with this property are the subject of our interest. The main results are as follows; If G is a locally finite group satisfying the weak minimal condition on non-permutable subgroups then either G is Chernikov or every subgroup of G is permutable. It is also proved that for a radical group G satisfying the weak minimal condition on non-permutable subgroups either G has *finite rank* or every subgroup of G is permutable. (Received September 12, 2014)