

semihereditary ring*

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Let R be a ring. A right (left) R -module M is called right (left) *semihereditary* if every finitely generated submodule of M is projective over R .

A ring R is said to be a right (left) *semihereditary ring* if all of its finitely generated right (left) ideals are projective as modules over R . If R is both left and right semihereditary, then R is simply called a semihereditary ring.

Remarks.

- A hereditary ring is clearly semihereditary.
- A ring that is left (right) semihereditary is not necessarily right (left) semihereditary.
- If R is hereditary, then every finitely generated submodule of a free R -module is a projective module.
- A semihereditary integral domain is a Prüfer domain, and conversely.

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