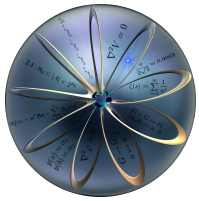

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semihereditary ring

Canonical name	SemihereditaryRing
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Defines	semihereditary module

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