The Stable Dependency Principle
Measure the stability of a component

- Fan-in: incoming dependencies

  - the # of classes outside the components that depend on the classes inside

- Fan-out: outgoing dependencies

  - the # of classes inside the components that depend on the classes outside

- I (Instability) = Fan-out / (Fan-in + Fan-out)

  - I = 0: responsible and independent; most stable and very hard to change

    - e.g., abstract component (all interfaces or abstract classes)

  - I = 1: irresponsible and dependent; no reason not to change

    - e.g., component with main function

The Stable Dependency Principle
Depend in the direction of stability

- The I metric of a component should be larger than the I metrics of the components that it depends on

- i.e., a component should depend on more stable components

- i.e., I metrics should decrease in the direction of dependency