**Bell-LaPadula Model**

- clearance
- level n
- level i
- objects

**Lattice Models**

- **Lattice Model**
  - subjects
  - objects
  - security classes (SC)

  (object x is in security class y)

- **Flow Policy**:
  - (SC, \( \rightarrow \))
  - \( \rightarrow \) is a reflexive, antisymmetric, transitive relation over SC
  - information is allowed to flow from object x to object y iff \( x \rightarrow y \).

**Lattice Flow Policy**:
A flow policy is a lattice if there exists least upper bound and greatest lower bounds on SC

**Certification of Information Flow**

For:
\[
b := f(a_1, \ldots, a_n)
\]
verify that:
\[
a_1 + \ldots + a_n \rightarrow b
\]

For:
if c then \( S_1 \) else \( S_2 \)
verify that:
\[
g \rightarrow S_1 \times S_2
\]
where:
\[
S_1 = x \{ b | b \text{ is a target of an assignment in } S_1 \}
\]
\[
S_2 = x \{ b | b \text{ is a target of an assignment in } S_2 \}
\]