**Refactoring Sequence:**

Identify code smells in the application codebase using a tool like JavaDeodorant

For the control group (Group A):

Refactor code smells randomly, using typical refactoring techniques

For the taxonomy group (Group B):

Refactor code smells by following the proposed taxonomy sequence:

Refactor "large class" smells

Refactor "feature envy" smells

Refactor "duplicate code" smells

Repeat for each trial application (mini game, payroll system)

**Code Quality - Dependent Variable**

Before refactoring - measure coupling, cohesion, complexity

After refactoring - remeasure coupling, cohesion, complexity

Compare pre and post metrics to evaluate improvement.

Also measure:

Number of new smells introduced

Time taken to complete refactoring