# GAME ORCHESTRATOR
- loads scene elements
- controls game state
- manages picking/selection
- manages UI / user input

## MAIN BOARD
## AUX. BOARDS
- Represents board
- manages tiles/pieces

### BOARD TILES
### GAME PIECES

## PROLOG INTERFACE
- manages communication with PROLOG server

## SCENEGRAPH — THEMES
- reads scene tiles
- contains/controls themes

## GAME SEQUENCE — GAME MOVES
- saves data on game (player moves)

...

## MODELING

### MAIN BOARD
- NUMBER OF CELLS **OR**
- NUMBER OF COLUMNS/LINES

### AUXILIAR BOARD
holds pieces before entering or after leaving main board
- number of cells
  ↳ must be able to hold all pieces of the **game** (1 board) OR of **each player** (2 boards)

### BOARD TILE
represents the cells in the boards. used in piece selection/movement
- type of tile

### PIECE
- type of piece (if applicable)
- player ownership

### SUGGESTIONS:
- CLASS HIERARCHY FOR SIMILAR COMPONENTS
- POINTERS/REFERENCES BETWEEN CLASSES
- CREATE CONSTRUCTOR + INITIALIZE VARIABLES AND DATA STRUCTURES

## PIECE MOVEMENT

### STEPS FOR MOVEMENT (for now)
- SELECT PIECE (start tile)
- SELECT DESTINATION (end tile)

### MOVE ANIMATION
move piece from one tile to another, without **intersecting** other objects
- START/END POSITION
- TIME OR SPEED

↳ diff distances   diff. distances
diff speed         same speed
 "                  "
same times          diff. times

tiles may be in the same or different boards

### ANIMATION: UPDATE
1. CHECK IF ACTIVE → optional (IF MOVEMENT REQUESTED)
2. CALCULATE ELAPSED TIME
3. CALCULATE/SAVE CURRENT TRANSFORMATIONS (AND OTHER VARIABLES)

### ANIMATION: APPLY
ANIMATION IS APPLIED IN THE PIECE'S DISPLAY() FUNCTION

## PICKING: MOUSE SELECT

### STEPS FOR PICKING
- ENABLE PICKING
  ↳ XMLscene.init
- REGISTER OBJECTS FOR PICKING
  ↳ object.display()
- MANAGE PICKING REQUESTS
  ↳ XMLscene.display()
- CLEAR REGISTRATION
  · after registering each object
  · after managing pick requests

### REGISTERING OBJECTS
register requests should occur in display functions

XMLscene.registerForPick(id, obj)
- id must be unique and >1
- all objects displayed after this call are associated to **ID** until

XMLscene.clearRegistration()

### MANAGE PICKING REQUESTS
- LOOP THROUGH LIST OF REQUESTS
  - GET ID OF PICKED OBJECT
  - CALL FUNCTION TO HANDLE REQUEST
  - CLEAR REQUEST FROM LIST

### HANDLE PICKING REQUEST ← if "legal"
- APPLY CHANGE IN GAME STATE
- PROVIDE VISUAL FEEDBACK, e.g.:
  - change appearance of object
  - animate object