

# Task 2

## Functional Requirements

### On Startup

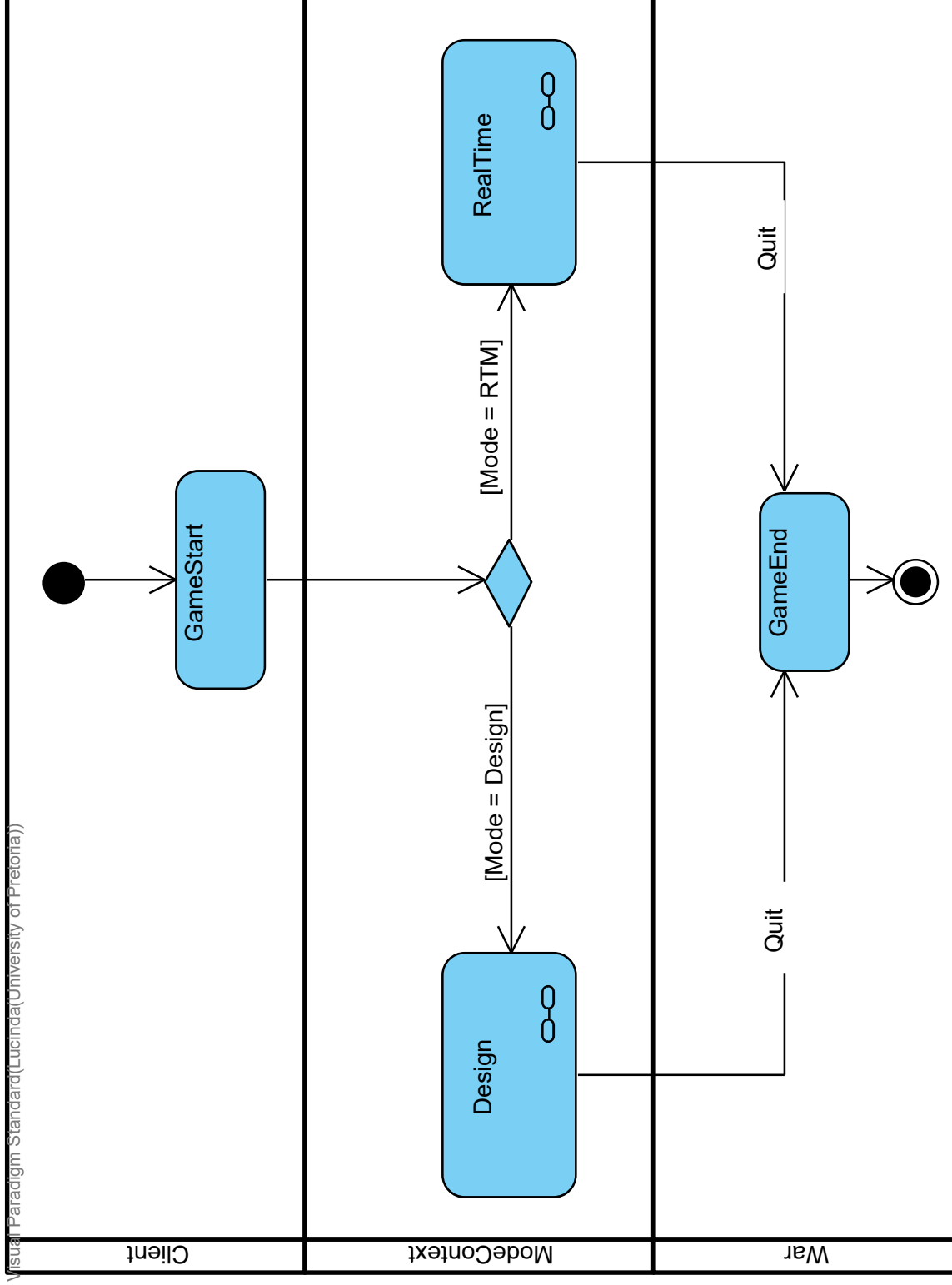
- User can choose between design mode and real time mode
- A user can choose a country from a provided list
- A user can name the war
- A user can save the state of the war
- A user can resume a war and consequently start a battle.
- A user can initiate a battle

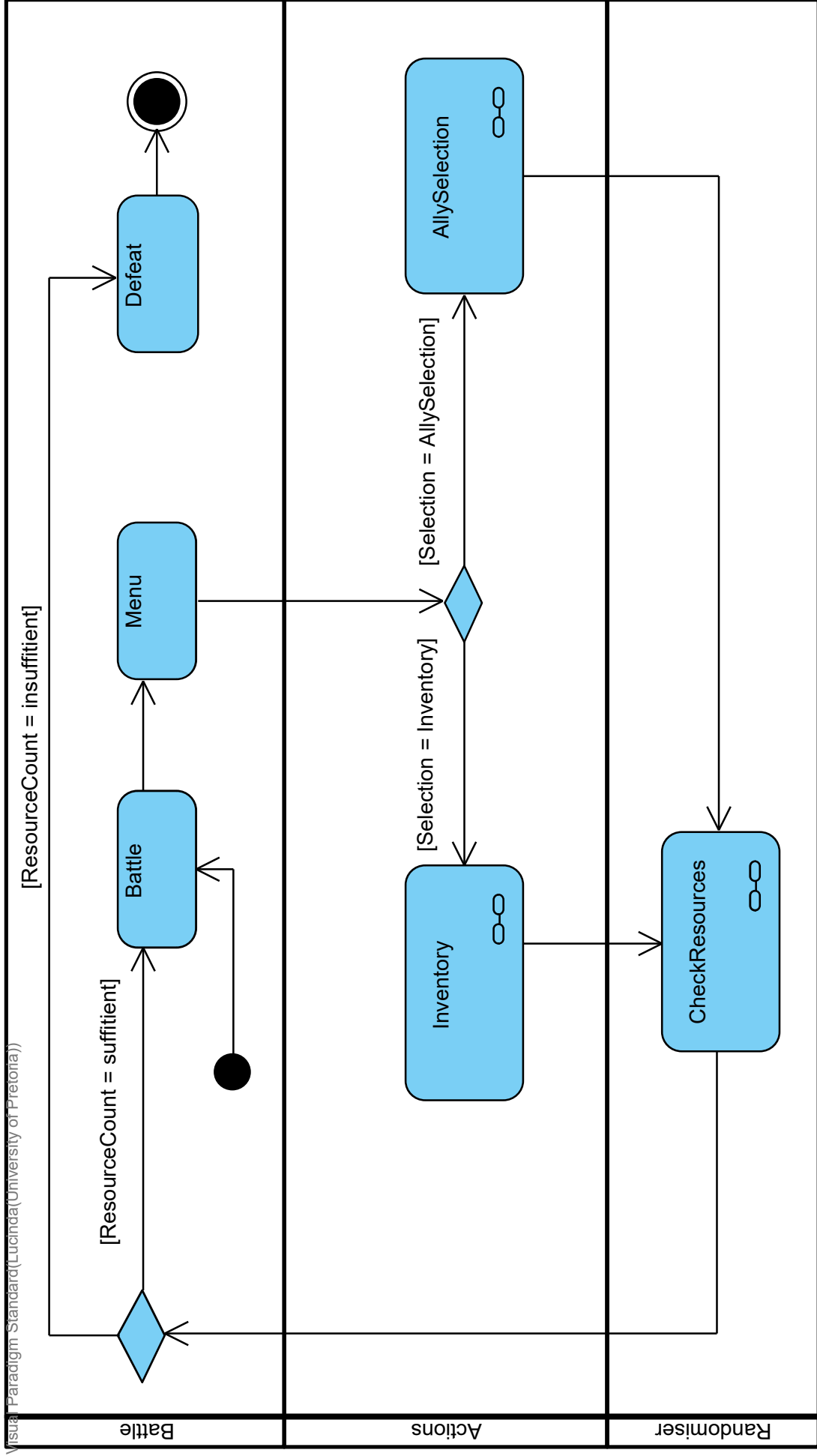
### Design Mode

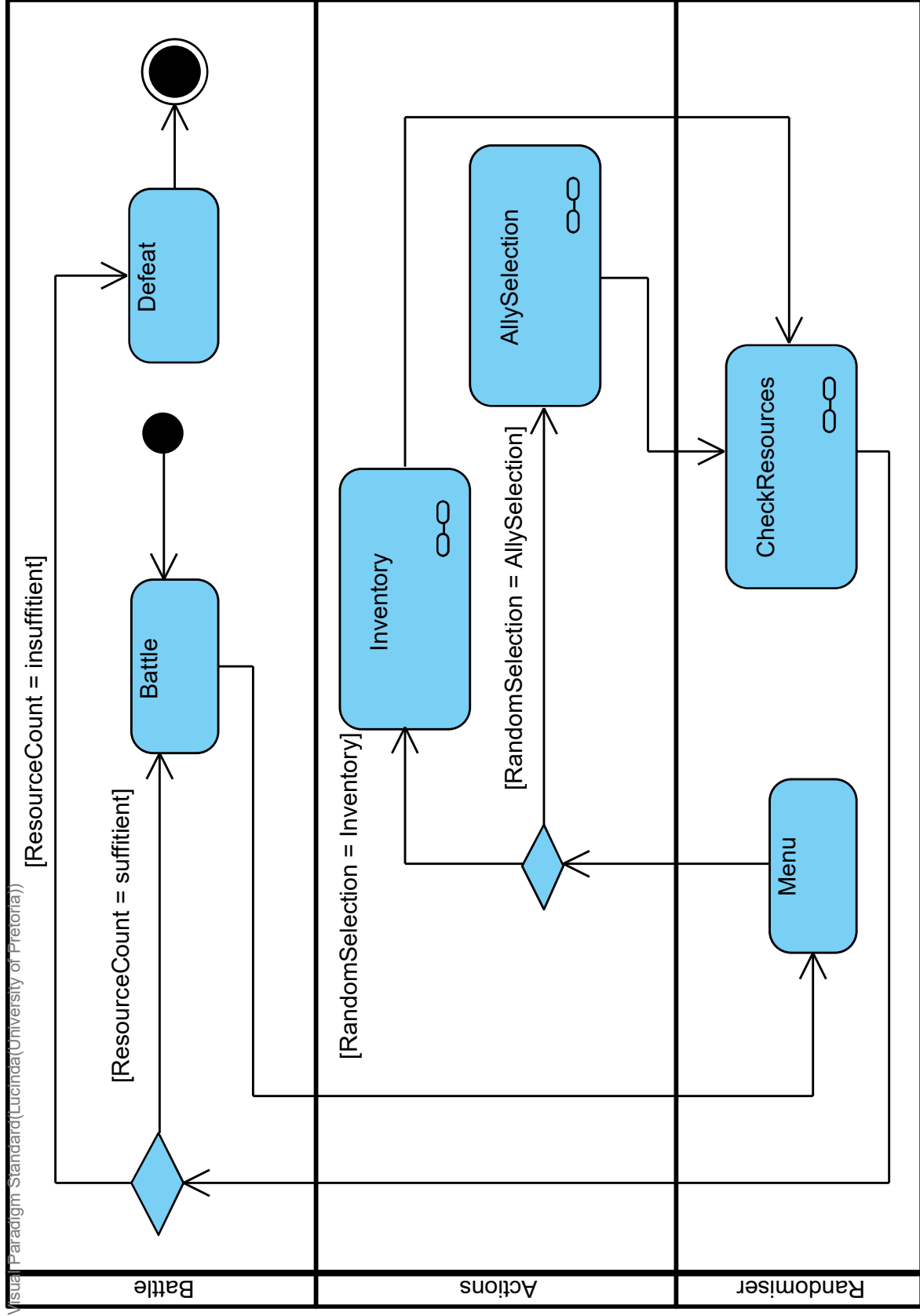
- A user can name the battle
- A battle is a round
- Each round a user can purchase from the inventory shop
- The shop consists of weapons, armour, supplies, soldiers, medics, vehicles.
- Based on what the user has at their disposal, the war theatre will be set.
- The user can also save the state of the battle.
- A user can undo the battle
- A user can surrender
- A user can apply to form alliances with other countries from the original pool.
- Ally countries have a friendly metre which will determine if they will accept the alliance.
- A user should be able to see their statistics at all times.
- A user's statistics depend on how many of each thing they have in their inventory.
- A user's action should change the phase of the war.
- Transport needs to be available before medics can be purchased.
- An ally needs to be able to pull out of an alliance
- Vehicles need to have different purposes

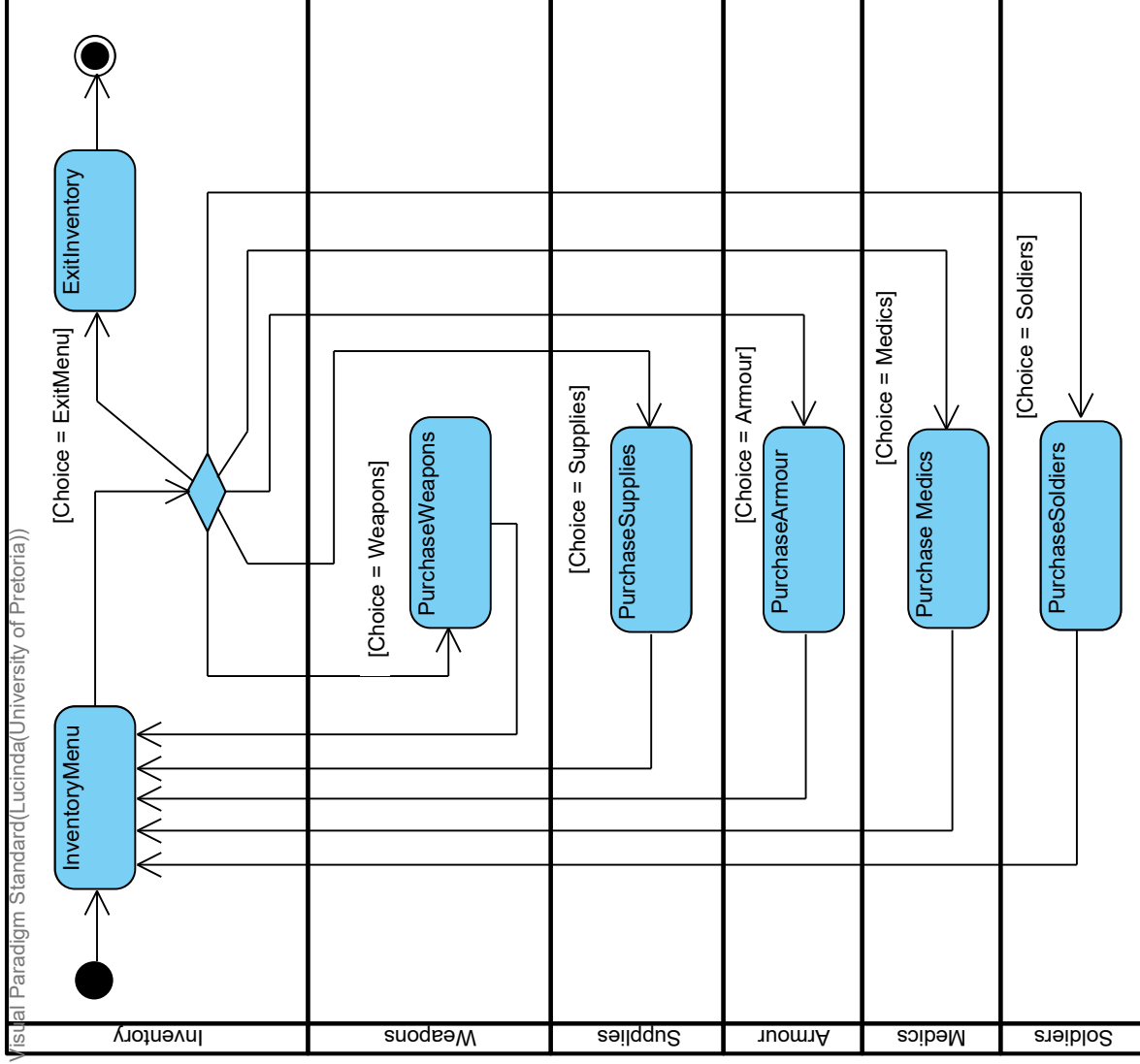
### Real Time Mode

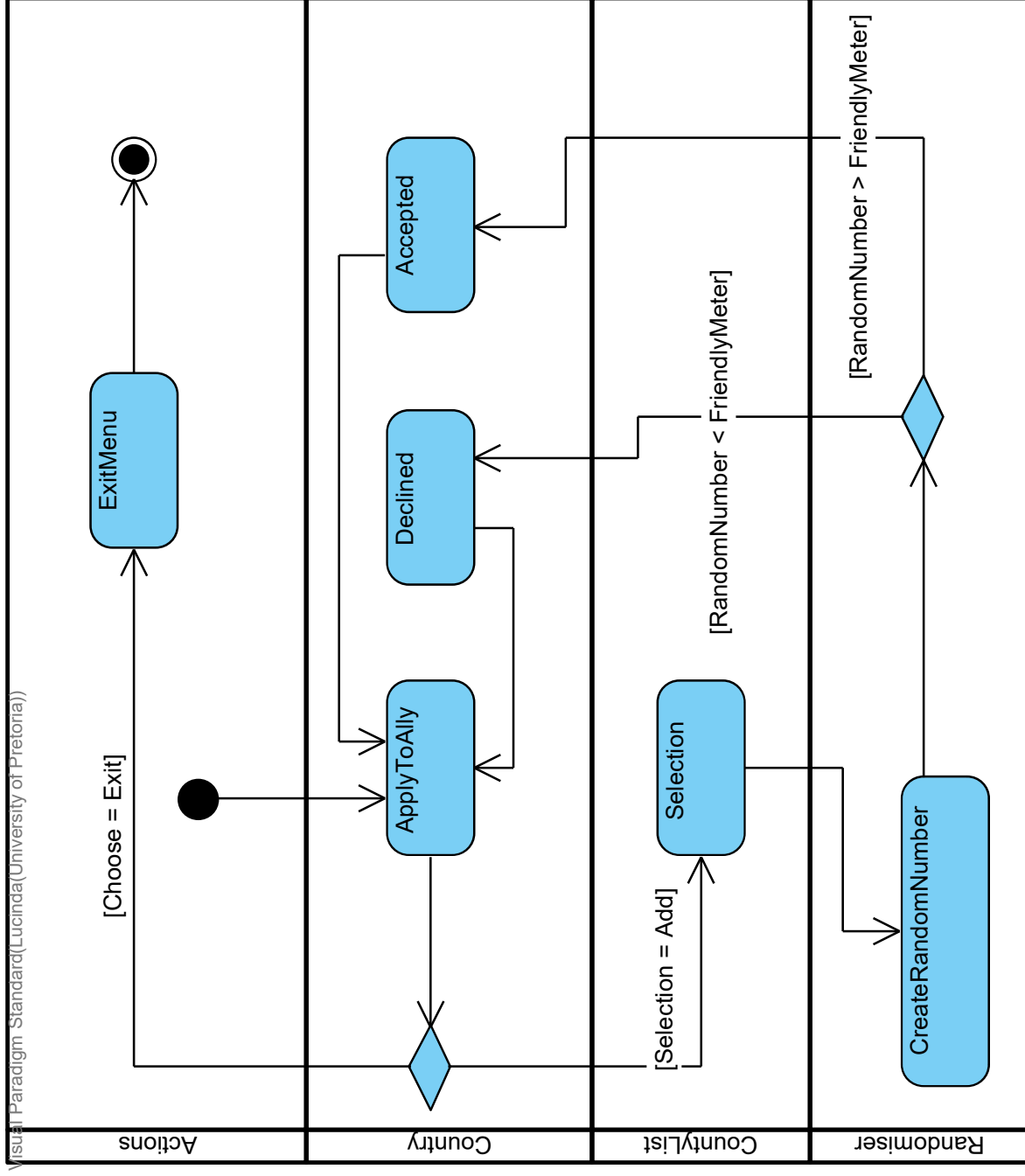
- Real time mode is an exact copy of the design mode, just all input is randomised.

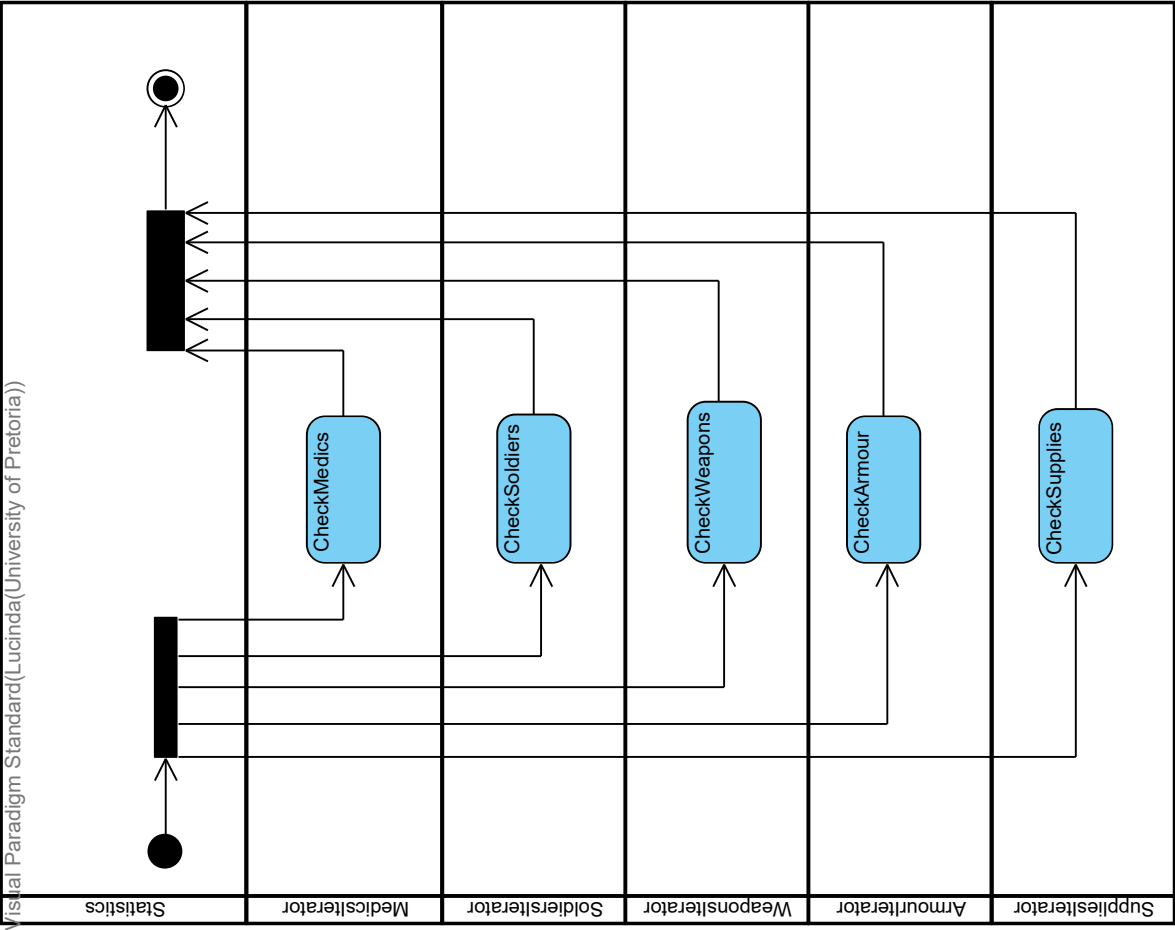












# Design Patterns

1. Memento
2. Abstract Factory
3. State
4. Strategy
5. Decorator
6. Iterator
7. Observer
8. Command
9. Prototype
10. Template
11. Facade



