Assessment 2 Test Designs

Elements to be tested

Movement - for each, test if unit is in right sector, if unit is no longer in its old sector, if sector changes ownership (if relevant), and if unit levels up (if relevant)
- Into unoccupied friendly- position, ownership
- Into unoccupied hostile - position, ownership, level up
- Into friendly (swap units) - position
- Into hostile (conflict) - position, ownership, level up, destroyed unit removed from player's list
- Capturing a landmark - attacking player gets correct amount/type of resources, defending player loses the same amount/type

Conflict - correct random range, right resource associated, tie resolution

Spawning
- On empty landmark - unit spawned
- On occupied landmark - unit not spawned (occupying unit not replaced)
- No landmark - no spawn

General Game
- Each player assigned to a landmark & spawned unit at start of game
- All other sectors neutral at start of game
- Unit cannot level up past 5
- Correct turn order - skip non-human players
- Ending turn after a conflict
- Ending turn after 2 moves
- Correct identification of eliminated players
- Removing eliminated players from the turn order
- Ending the game when only one human player is left - winner

UI
- Card for each player - show how much of the map is owned by them, the players beer amount, the players knowledge amount
- Current player card - show which players turn it is (coloured player number)

Unit Tests

GameTest

- Creating players (human and non-human)
- Each player has 1 sector and 1 unit in it at start of game on landmark
- Selecting a unit selects the correct one
- NextPlayer changes to correct player
- NextTurnState changes to correct turn state
- Eliminated players skipped
- Check for winner
- Game ends correctly - turn state = null
- All unallocated sectors are neutral
- Game state increased correctly

PlayerTest

- Player moves to sector
- Player moves to landmark
- IsEliminated
- Spawn units -nextTurn needs to happen
- Test spawning on landmark when player has no landmark

SectorTest

- Unoccupied sector - currently into null, need into owned
- Swap friendlies
- Move into occupied hostile (forced conflict resolution)
- Set owner
- Initialise - landmarks, clear unit and owners
- Highlight
- Clear unit
- Click - select and deselect
- End turn after conflict
- Turn incremented after movement
- Test conflict - tie resolution

UnitTest

- Movement
- Destroy self
- Select + deselect
- Level up =< 5

UI Tests

- UI must appear once the game has loaded
- Map ownership on player card must be updated when taking neutral sector
- Map ownership on player cards for both defenders and attackers must be updated when taking hostile sector
- Map ownership and resource amount (beer/knowledge) on player cards for both players must be updated when taking landmarks
- UI must show the current player (by colouring the player number on the card)