**Use Cases CECS 343**

**King of Tokyo**

Hunter Davis

Tymee Kong

Tanner Mindrum

Group L

**Table of Contents**

[**Start Program**](#_1genxyz56xo7) **4**

[**Set Options**](#_t3daii7ot3cm) **4**

[**Start Game**](#_igyfr3jd189h) **5**

[**Remove Player from Game**](#_p3vg12w80z5o) **5**

[**Select Number of Human Players**](#_sei6do92gjey) **6**

[**Select Number of AI Players**](#_i1ot3ngwqrv6) **6**

[**Enter Player Name**](#_yyzxazpqbxg8) **6**

[**Select Monster**](#_57x7323u5coq) **7**

[**Roll Black Dice**](#_26qdxyttylho) **7**

[**Roll Green Dice**](#_3fx7do8mlzoc) **8**

[**Resolve Dice**](#_1ssb0ill9xxj) **8**

[**Roll for Initiative**](#_1t1805izw73j) **9**

[**Shuffle Power Cards**](#_29q8qxfx81qb) **9**

[**Deal Power Card(s)**](#_f8qz4j3isl5u) **10**

[**Play Power Card**](#_5rfsw12koeti) **10**

[**Buy Power Card**](#_xk10gmh4zu0v) **11**

[**Sweep Power Cards**](#_t2ifwnn8cfu1) **12**

[**Discard Power Card**](#_7fndb3jzuyw8) **12**

[**Gain Energy**](#_ruu2b5h62txk) **13**

[**Lose Energy**](#_vwtx551agdrl) **13**

[**Gain Victory Points**](#_tnqi7pc4ibzo) **14**

[**Smash**](#_wz0s5vg84pb) **14**

[**Gain Life Points**](#_pua70iuvco86) **15**

[**Lose Life Points**](#_fjp8p483ifuf) **16**

[**Gain Tokens**](#_i9z4id64au9h) **16**

[**Lose Tokens**](#_kkta3rrkiau8) **17**

[**Enter Tokyo**](#_99x4anl3i4go) **17**

[**Leave Tokyo**](#_is8ikhlgorza) **18**

[**Start Turn**](#_2p7olube4x51) **18**

[**End Turn**](#_i9ck9q12p0p5) **19**

[**Player Loses**](#_kufvg4utydb) **19**

[**Player Wins**](#_9gzkfzt13p2k) **20**

[**Restart Game**](#_hzwtoou3jnw) **20**

[**Edit Players**](#_9vgihoeyvdx3) **21**

[**End Game**](#_pe2xmvrr8h74) **21**

## Start Program

**Identifier: UC-1**

**Description:**

* User launches the program

**Preconditions:**

* The user needs to have the program installed on their computer

**Postconditions:**

* User has launched the game

**Basic Course of Action:**

1. User clicks on the game icon
2. The game launches

## Set Options

**Identifier: UC-2**

**Description:**

* A user wants to change their game options to fit their needs.

**Preconditions:**

* User must be running the game.

**Postconditions:**

* The user must confirm they’re change of options by selecting “yes” on a confirmation menu

**Basic Course of Action:**

1. User opens options menu
2. User selects which option to alter
3. User adjusts selected option

## Start Game

**Identifier: UC-3**

**Description:**

* User starts the game

**Preconditions:**

* The user has to launch the game

**Postconditions:**

* User can play the game, game state starts

**Basic Course of Action:**

1. User clicks on the start game button
2. The game starts

## Remove Player from Game

**Identifier: UC-4**

**Description:**

* A player can be removed from the game.

**Preconditions:**

* The player needs to start the game and have players that can be removed.

**Postconditions:**

* A player is removed from the game.

**Basic Course of Action:**

1. User clicks on a player.
2. User clicks the remove button.
3. The player is removed from the game.

## Select Number of Human Players

**Identifier: UC-5**

**Description:**

* A user selects the number of human players playing the game

**Preconditions:**

* There should be that many human players

**Postconditions:**

* Players enter their name and monster

**Basic Course of Action:**

1. User selects number of human players
2. Each human player enters their name and selects their monster

## Select Number of AI Players

**Identifier: UC-6**

**Description:**

* A user selects the number of AI players playing the game

**Preconditions:**

* A user must have started the program

**Postconditions:**

* The AI will play out their own turn with no human input

**Basic Course of Action:**

1. User selects number of AI players
2. The AI plays out their own turns throughout the game

## Enter Player Name

**Identifier: UC-7**

**Description:**

* A user selects the number of AI players playing the game

**Preconditions:**

* A user must have started the program

**Postconditions:**

* The AI will play out their own turn with no human input

**Basic Course of Action:**

1. User selects number of AI players
2. The AI is given a randomly-selected name and monster
3. The AI plays out their own turns throughout the game

## Select Monster

**Identifier: UC-8**

**Description:**

* A user selects their monster avatar for the game

**Preconditions:**

* A user had entered their name

**Postconditions:**

* This monster is used for identification in game

**Basic Course of Action:**

1. User enters their player name
2. User selects their monster
3. Monster is used as the player’s avatar throughout the game

## Roll Black Dice

**Identifier: UC-9**

**Description:**

* A player can roll 6 black dice

**Preconditions:**

* The player can only roll dice if it is their turn

**Postconditions:**

* The player will get results from the dice roll

**Basic Course of Action:**

1. User clicks the roll button
2. The dice are rolled randomly

## Roll Green Dice

**Identifier: UC-10**

**Description:**

* A player can roll 1 or 2 green dice if they have a Power card that lets the player roll green dice.

**Preconditions:**

* It is a player’s turn and they have a Power card that lets them roll green dice.

**Postconditions:**

* A player rolls 1 or 2 green dice depending on their Power card.

**Basic Course of Action:**

1. During a player’s turn, they have a Power card that lets them roll green dice.
2. A player plays the Power card, enabling them to roll green dice.
3. A player rolls 1 or 2 green dice depending on the power card.

## Resolve Dice

**Identifier: UC-11**

**Description:**

* A player can resolve a number of their dice, choosing to keep the result of those, and to re-roll the rest.

**Preconditions:**

* A player has already first rolled their dice

**Postconditions:**

* A player can resolve again, but only do this three times

**Basic Course of Action:**

1. A player rolls their dice
2. A player chooses to resolve any amount of their dice, or not to
3. Repeats up to a maximum of three times

## Roll for Initiative

**Identifier: UC-12**

**Description:**

* The players each roll the dice for the highest number, which determines which player takes the first turn.

**Preconditions:**

* The game has started and the players have been selected.

**Postconditions:**

* Whoever has the highest number takes the first turn. If there is a tie for first, the two that tied will roll again, against each other.

**Basic Course of Action:**

1. All players take turns rolling dice to see who has the highest score
2. If there is a tie for the highest number, the two who tied will roll again
3. Whoever has the highest number rolled will take their turn first

## Shuffle Power Cards

**Identifier: UC-13**

**Description:**

* Shuffles the deck of the power cards

**Preconditions:**

* Instantiation of the power cards

**Postconditions:**

* The shuffled deck of power cards will be drawn from and used by the players

**Basic Course of Action:**

1. Make sure Power Cards are instantiated in a deck
2. Shuffle the deck

## Deal Power Card(s)

**Identifier: UC-14**

**Description:**

* Gives a specific amount of power cards to a specific player

**Preconditions:**

* Power card is instantiated

**Postconditions:**

* Power card is now in possession by a player

**Basic Course of Action:**

1. Selects Card from deck
2. Card is dealt to specific player
3. Player now is in possession of that card

## Play Power Card

**Identifier: UC-15**

**Description:**

* A player plays a single specific power card in their possession.

**Preconditions:**

* A player was dealt that power card and has enough power cubes to play it.

**Postconditions:**

* A player no longer owns that power card if it was discarded, and loses the specified power cubes.

**Basic Course of Action:**

1. Player chooses which card they want to play, spending the cost of power cubes
2. Any card effects come into effect and become active
3. Card is either kept active by player or discarded

## Buy Power Card

**Identifier: UC-16**

**Description:**

* A player buys one or more of the three face up cards. They must spend the energy cost on the card to purchase it. The deck then immediately replaces each card bought.

**Preconditions:**

* Must purchase from the three available face up cards, and must have enough energy cubes to purchase the card. The player can continue to do this as long as they have enough cubes

**Postconditions:**

* Player has energy cost subtracted from their energy cube pool for each card they purchase

**Basic Course of Action:**

1. Player buys card if they have enough energy cubes and acquires card
2. Player owns card
3. Card is replaced from deck to face up cards
4. Player can continue to purchase if desired

## Sweep Power Cards

**Identifier: UC-17**

**Description:**

* If a player does not want to purchase the available face up cards but wants different ones, they can spend 2 energy cubes to sweep the three face up cards to the discard pile, then reveal three new power cards from the deck, which are immediately available for purchase. The player can continue doing this if they please as long as they can spend 2 energy cubes per sweep.

**Preconditions:**

* Player must have at minimum 2 energy cubes to sweep the cards

**Postconditions:**

* Players can continue to sweep power cards if they wish and have enough energy cubes.

**Basic Course of Action:**

1. A Player can pay 2 energy cubes if they choose to sweep active face up cards
2. Cards are replaced from deck
3. Player is able to repeat if they have enough cubes

## Discard Power Card

**Identifier: UC-18**

**Description:**

* When a card must be discarded, whether through sweeping of the face up cards, or a player plays a card with a discard type.

**Preconditions:**

* A card must be headed to the discard pile.

**Postconditions:**

* The card is kept in a discard pile, essentially a second deck of cards.

**Basic Course of Action:**

1. A card is discarded through a player’s hand or swept from the face up cards
2. This card is sent to the discard pile

## Gain Energy

**Identifier: UC-19**

**Description:**

* A player gains energy, either from a card effect or from rolling

**Preconditions:**

* Must come from a card effect or dice roll

**Postconditions:**

* Player has gained a specified amount of energy cubes

**Basic Course of Action:**

1. Player is affected by dice roll or card effect
2. Player gains the specified amount of energy

## Lose Energy

**Identifier: UC-20**

**Description:**

* A player loses energy when they spend energy cubes to buy a card, sweep cards, and to resolve or activate certain card effects

**Preconditions:**

* A player must have the required amount of energy to perform the action they are trying to do. If they do not have enough, the action is cancelled.

**Postconditions:**

* Player loses specified amount of energy cubes

**Basic Course of Action:**

1. If the player’s action does not have enough power cubes associated, the action is cancelled.
2. Otherwise, the player loses a specified amount of cubes

## Gain Victory Points

**Identifier: UC-21**

**Description:**

* A player gains victory points from three of a kind dice rolls, entering Tokyo, starting your turn in Tokyo, from Power Card effects,

**Preconditions:**

* The player needs to roll six dice to have a chance to gain victory points

**Postconditions:**

* The player gains victory points if they rolled three numbers of the same value

**Basic Course of Action:**

1. The player rolls the dice
2. The dice rolls three numbers in a row
3. Players can resolve the dice to gain the victory points
4. Players can gain victory points from Tokyo-based effects
5. Players can gain victory points from Power Card effects

## Smash

**Identifier: UC-22**

**Description:**

* A player can attack if the dice is rolled on a smash attack, target is dependent on where the player who rolled is.

**Preconditions:**

* The player needs to roll their dice, and however many smashes they land on, they inflict that number of damage to other players not in their location

**Postconditions:**

* The players who are not in the same zone as the player who rolled take damage equal to the number of smashes their dice landed on

**Basic Course of Action:**

1. Player whose turn it is rolls their dice
2. Players not in the same zone take damage equal to the number of dice landed on smash
3. Whichever player starts the game does not cause other players to lose hearts

## Gain Life Points

**Identifier: UC-23**

**Description:**

* A player gains life points, or heals, when they are outside of tokyo and another player rolls Heal, or are in Tokyo and use power cards, or, in general, through power cards.

**Preconditions:**

* A player must be alive and not have full health.

**Postconditions:**

* A player gains health equal to the amount of healing from a Heal roll or from power cards.

**Basic Course of Action:**

1. A player is a life and is missing some life points.
2. A player is healed through a Heal roll or power cards.
3. A player gains a specific amount of health from that roll or power card.

## Lose Life Points

**Identifier: UC-24**

**Description:**

* A player loses life points from opposing players using Smash or from the effects of various power cards.

**Preconditions:**

* A player must be alive.

**Postconditions:**

* A player loses health equal to the amount of damage that was dealt.

**Basic Course of Action:**

1. A player has a certain amount of life points.
2. A different player uses Smash or a power card that deals damage to other players.
3. A player loses health equal to the amount of damage that was dealt.

## Gain Tokens

**Identifier: UC-25**

**Description:**

* Gain tokens with the playing of certain power cards.

**Preconditions:**

* A player holds a power card that involves the gaining of tokens.

**Postconditions:**

* A player gains tokens after playing such a power card.

**Basic Course of Action:**

1. A player holds power card that allows them to gain tokens.
2. That player plays the power card.
3. The player gains the type and amount tokens associated with that power card.

## Lose Tokens

**Identifier: UC-26**

**Description:**

* Lose tokens with the playing of certain power cards.

**Preconditions:**

* A player holds tokens and a power card that involves the loss of tokens.

**Postconditions:**

* A player plays a power card that results in a loss of power cards.

**Basic Course of Action:**

1. A player holds tokens and a power card that results in the loss of tokens.
2. The player plays such power card, resulting in a loss of tokens.
3. The player loses tokens of the type and amount associated with that power card.

## Enter Tokyo

**Identifier: UC-27**

**Description:**

* A player enters Tokyo. This happens when no other player is in Tokyo or it is the first move of the game.

**Preconditions:**

* No other player is in tokyo, it is the first turn of the game, and the player choosing to enter tokyo is not in tokyo.

**Postconditions:**

* A player moves into Tokyo.

**Basic Course of Action:**

1. A player is not currently in Tokyo.
2. If a player satisfies any of the conditions to enter Tokyo, they may enter.
3. The player resides in Tokyo.

## Leave Tokyo

**Identifier: UC-28**

**Description:**

* A player leaves Tokyo. This may only happen after a player currently residing in Tokyo loses health from a Smash rolled by another player.

**Preconditions:**

* A player currently resides in Tokyo.

**Postconditions:**

* A player leaves Tokyo.

**Basic Course of Action:**

1. A player currently resides in Tokyo.
2. If that player loses health from a Smash rolled by another player, they may leave Tokyo.
3. The player leaves Tokyo.

## Start Turn

**Identifier: UC-29**

**Description:**

* A player’s turn begins; they take control of the black dice and the program.

**Preconditions:**

* A player is not in the middle of their turn and their turn is next.

**Postconditions:**

* The player takes control of the black dice and is in control of the program.

**Basic Course of Action:**

1. A player who isn’t in the middle of their turn begins their turn after player before them passes them the black dice.
2. The next player’s turn then begins and they gain control of the program.

## End Turn

**Identifier: UC-30**

**Description:**

* A player chooses to end their turn.

**Preconditions:**

* A player must be in the middle of their turn.

**Postconditions:**

* A player’s turn ends, the player passes the black dice to the next player.

**Basic Course of Action:**

1. A player is in the middle of their turn.
2. The player chooses to end their turn, rendering them unable to make any more moves.
3. The player passes the black dice to the next player.

## Player Loses

**Identifier: UC-31**

**Description:**

* A particular player loses a game.

**Preconditions:**

* A player’s monster reaches 0 life points.

**Postconditions:**

* That player is eliminated from the game. They can no longer win, therefore they lose.

**Basic Course of Action:**

1. A player’s life points reaches 0.
2. That player is eliminated from the game.
3. That player loses.

## Player Wins

**Identifier: UC-32**

**Description:**

* A particular player wins a game.

**Preconditions:**

* A player’s living monster reaches 20 victory points while surviving their turn or is the last survivor (when every other player’s monster’s life points is 0) and the player ends their turn.

**Postconditions:**

* That player wins the game and the game is over.

**Basic Course of Action:**

1. Player’s monster reaches 20 victory points while surviving their turn or is the last surviving player remaining in the game
2. Player ends their turn.
3. Game concludes and that player wins the game.

## Restart Game

**Identifier: UC-33**

**Description:**

* A user wants to restart a current game.

**Preconditions:**

* User is currently in the game.

**Postconditions:**

* The game state will reset with the current players.

**Basic Course of Action:**

1. User chooses to reset game.
2. Game resets after user confirms they want to exit game.

## Edit Players

**Identifier: UC-34**

**Description:**

* After the game ends you can choose to play again with the same characters or edit which character you’re playing.

**Preconditions:**

* User must have a pre-existing character and select that they want to edit which character they’re playing.

**Postconditions:**

* Their character will update to the new character they selected to change to.

**Basic Course of Action:**

1. User chooses to edit which character they’re playing
2. Swap character to new character of choice
3. User’s character updates and they can play game using new character

**Alternate Course A:** Character of choice is being played by another player

1. If the user chooses a character that is taken, they will be notified as such and keep their current character

## End Game

**Identifier: UC-35**

**Description:**

* A user wants to end the game.

**Preconditions:**

* The user must select that they want to end the game from the menu.

**Postconditions:**

* The game exists after the user confirms they want to exit the game.

**Basic Course of Action:**

1. User chooses to exit application from menu
2. Game force closes upon confirmation from user