

## Key:

→ Yellow highlight: Temporary needs to be elaborated on

→ Red Highlight: deprecated/to remove

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## ***1: Genre/Story/Mechanics Summary***

**Game Name:** Blades On Ice, **Genre description:** Co-op Sports-sim, **Target Platform:** PC

### **(A) Game Concept:**

Skate your way to victory in Blades on Ice, a cooperative video game about ice dancing! Pair up with a friend and play as Alex and Damien, an up-and-coming skating team, to fix their strained relationship and qualify for Team USA. Together, players will practice and perform impressive skating routines, mastering elements like lifts and spins, all while discovering what challenges are hindering the young team. Will you be able to help Alex and Damien make it onto Team USA and learn what it takes to be professional ice dancers?

Blades on Ice is a PC game developed by a small team of immersive media design students at UMD as a cross-disciplinary project combining art and computer science. Blades on Ice also represents a technical step forward, being the first game to incorporate motion capture of professional ice dancers to animate the game's characters.

300 word description:

Skate your way to victory in Blades on Ice, a cooperative video game about ice dancing! Pair up with a friend and play as Alex and Damien, an up-and-coming skating team, to fix their strained relationship and skate in competitions. Will you be able to help Alex and Damien make it onto Team USA?

Similar titles: ( **It Takes Two**, **Tony Hawk's Pro Skater**, **Persona**, **jet set radio** )

## 2: Production

### (A) Roles:

- **Andrei:** 3D character art, motion capture, character animation
- **Lois:** Art, Story writing, character and environment design
- **Davin:** Game Design, UX, and programming
- **Astrid:** Narrative Design, Writing, and programming

### Engine Settings

## 3: Story and Setting

### Full Script

### (A) Narrative Overview:

- **Alexandra (“Alex”) Adu** is the daughter of two former Olympic gold medalists. She’s a naturally talented ice dancer but struggles academically and feels pressured by her parents’ high expectations.
- **Damien Bardon** has moved from Wisconsin to Maryland specifically to team up with Alex. He’s highly disciplined in both academics and skating but often comes off as serious or aloof.

The story begins by flashing back to a disastrous performance at a regional competition (late August/September). In her distracted state, Alex causes Damien to trip, spraining his ankle. The pair fails to qualify and both blame themselves—and each other. Alex avoids practice out of guilt; Damien grows frustrated that she won’t train harder. Their coach (Alex’s mother) forces them back on the ice, citing their potential and the upcoming season.

### Story Outline

### (B) Setting and World:

Set in the suburban town of Stoneville, Maryland. Players move between cozy home environments, a bustling local school, and a lively ice rink where Alex and Damien train. As the season progresses, they travel to larger arenas in other states for regional and national competitions. Throughout these locations, the contrasting demands of teenage academics and elite athletics shape the characters’ experiences and interactions.

## List of Key Locations

- Stoneville Skating Rink
- Stoneville High School hallway
- Adu Residence
- Damien's Apartment
- Regional Competition Arena
- National Competition Arena

## (C)Characters:

### 1. Alexandra Adu

#### Backstory

- Korean-Ghanian-Kenyan
- Born and raised in Maryland, Alex is the daughter of two former Olympic gold medalists in ice dancing. From a young age, she was put on the ice, essentially inheriting a legacy she never had much choice about.
- Initially, she skated with another partner who moved away, leaving her without a dance partner until Damien came along.
- Though naturally talented on the ice, Alex has always struggled academically—particularly in physics—and feels pressured to meet her parents' high expectations while juggling homework, practices, and some semblance of a social life.

#### Personality

- Warm, bubbly, and friendly in casual settings.
- Often cracks jokes or uses lighthearted banter to mask insecurities.
- Can seem scattered or disorganized.

#### Motivation

- She genuinely loves ice dancing but sometimes questions if her ambitions are truly her own or just something her parents expect.
- As the season progresses, her primary goal is to improve her partnership with Damien and prove to both her parents and herself that she's capable of balancing school, competitions, and the dream of reaching Team USA.



### 2. Damien Bardon



## **Backstory**

- Originally from Wisconsin, Damien moved to Maryland solely to partner with Alex when they both needed a new ice dance teammate.
- He grew up in a working-class family with younger siblings, often taking responsibility at home while honing his skating skills.
- Academically gifted, he is accustomed to studying hard and is driven by a quiet determination to succeed.

## **Personality**

- Serious, focused, and sometimes overly meticulous. He can come across as aloof or cold, but he simply internalizes his worries and frustrations.
- Holds himself to high standards in skating and school, believing that diligence is the key to achieving his dreams.
- Despite his stoic demeanor, he cares deeply about others—especially his family—and tends to show affection more through acts of service than open emotions.

## **Motivation**

- Driven by a desire to make the most of his sacrifice (moving away from home) and prove himself worthy of being Alex's partner.
- Aims to reach nationals and earn a spot on Team USA, partly out of personal ambition but also to validate the move that upended his life.
- Develops a secondary motivation to support Alex academically and emotionally once he realizes how much she's struggling.

# **3. Ahyeon Adu (Coach Adu)**

## **Backstory**

- A former Olympic gold medalist in ice dancing who met her husband, Charles, on the competitive circuit.
- Post-retirement, she transitioned into coaching; she's been Alex's main mentor from a young age.
- Highly respected in the ice dance community for her technical expertise and strict training routines.

## **Personality**

- Disciplined, detail-oriented, and not afraid to be blunt in her critiques.

- Holds her daughter and Damien to very high standards, believing that tough love is necessary for elite-level success.
- Deeply protective of Alex, though sometimes her desire for Alex to excel overshadows Alex's personal struggles.

### **Motivation**

- She wants Alex to inherit the family's legacy and believes Alex can become an Olympian.
- Committed to pushing both Alex and Damien to reach their potential, focusing on perfecting technique and forging a winning mindset.
- Underneath her stern exterior, she's proud and supportive of her daughter—though she struggles to show it in softer ways.

## **4. Charles Adu**

### **Backstory**

- Ghana and Kenya
- Like Ahyeon, Charles is a former Olympic gold medalist. He co-owns their training rink and assists behind the scenes.
- Since retirement, he's taken on more of a supportive role at home, balancing the demands of running a sports-oriented household with helping Alex navigate her teenage life.

### **Personality**

- Easier-going than his wife, Charles is the calm, encouraging parent who offers moral support.
- A good listener, quick to sense Alex's (and Damien's) worries and soothe them.
- Often acts as a mediator, diffusing tension between Coach Adu's strictness and Alex's rebellious streak.

### **Motivation**

- Wants Alex to succeed but also wants to ensure she maintains a healthy relationship with skating and doesn't burn out.
- Feels protective of Damien as well, knowing the boy moved far from home.
- Ultimately aims for everyone—family and students alike—to find happiness and fulfillment in ice dancing, not just accolades.

## **5. Caroline Park**

## Backstory

- Caroline is a longtime school friend of Alex. Though not a skater herself, she's fully aware of Alex's background and ongoing struggles with balancing academic and athletic life.
- Comes from a supportive home that encourages her extracurricular interests (though they're not as high-pressure as Alex's situation).

### Personality

- Empathetic, practical, and often the "voice of reason" within the friend group.
- Provides gentle advice and tries to keep Alex grounded when she's panicking over tests or competitions.
- Quietly playful—she isn't as loud as Nico but still enjoys a good laugh.

## Motivation

- Genuinely loves supporting her friends and wants to see Alex succeed without sacrificing her mental health.
- Curious about Damien, mostly because she wants to understand the new dynamic in Alex's life.
- Thrives on friendship and community; she's the kind of person who organizes group study sessions or impromptu hangouts.

## 6. Nicolas ("Nico") Olivas

### Backstory

- Cuban
- Another close friend of Alex from school who shares the same lunch period and group texts.
- Quick-witted and playful, Nico usually turns everyday occurrences into comedic bits.
- No direct connection to figure skating, but wholeheartedly cheers Alex on.

### Personality

- Extroverted, chatty, and brimming with energy—a stark contrast to Damien's more reserved demeanor.
- Enjoys teasing Alex and Caroline good-naturedly, and tries to include Damien once he realizes Damien is socially isolated.
- Uses humor to lighten heavy situations, though sometimes can be a bit over the top.

### Motivation

- As a loyal friend, he's determined to show up for Alex's competitions and celebrations.
- Loves building and maintaining a tight-knit circle of friends, often pestering Alex to bring Damien around.

- Encourages Alex to relax and “live a little,” hoping she can manage stress better.

## 4: Gameplay

### (A) Gameflow:

- **OPENING SCENE**
  - Provide context on how competitions work
- **TUTORIAL**
  - Will teach the basic hold release input for elements and the **start** motion and **crossover** motion
- **PART 1**
  - **Scene**
  - **Practice 1**
    - **Introduce Step sequence** and **heel-turn** movements
    - **Tug-of war system** aka how you fail
    - How elements are graded
  - **Practice 2**
    - Go further in **Step Sequence** practice, and **Connection & Musicality Expressions**
      - learn how buttons correspond to expression and the need to time it/do the right expression
    - Add **Spin movements**
  - **Practice 3**
    - **Introduce Lifts**, new movements(**Lift, jump**), and **Soft and Bold Dynamic Expressions**
  - **Scene**
  - **Competition 1**
    - Players will perform 2/6ths of the routine
  - **Scene**
- **PART 2**
  - **Scene**
  - **Practice 4**
    - **Introduce Spins** and the dramatic choreo?
  - **Practice 5**
    - **Introduce Twizzles**
  - **Scene**
  - **Competition 2**
    - Players will perform 5/6ths of the routine



- Scene
- **PART 3**
  - Scene
  - Practice 6
    - Flow motion
  - Practice 7
    - Swap out an element in the routine
  - Scene
  - Competition 3
    - Players will perform the whole of the routine
  - Scene

## TUTORIALS

### By First competition

- introduce 2 elements, (5 movements)
- health system,
- 1 expression type (maybe make the other expressions unlockables)

### By Second competition

- introduce 2 or 1 elements

### By Third Competition,

- Introduce Flow or last element

### Brainstorm:

Could be considered a manager game

Equipment

Moves

Condition

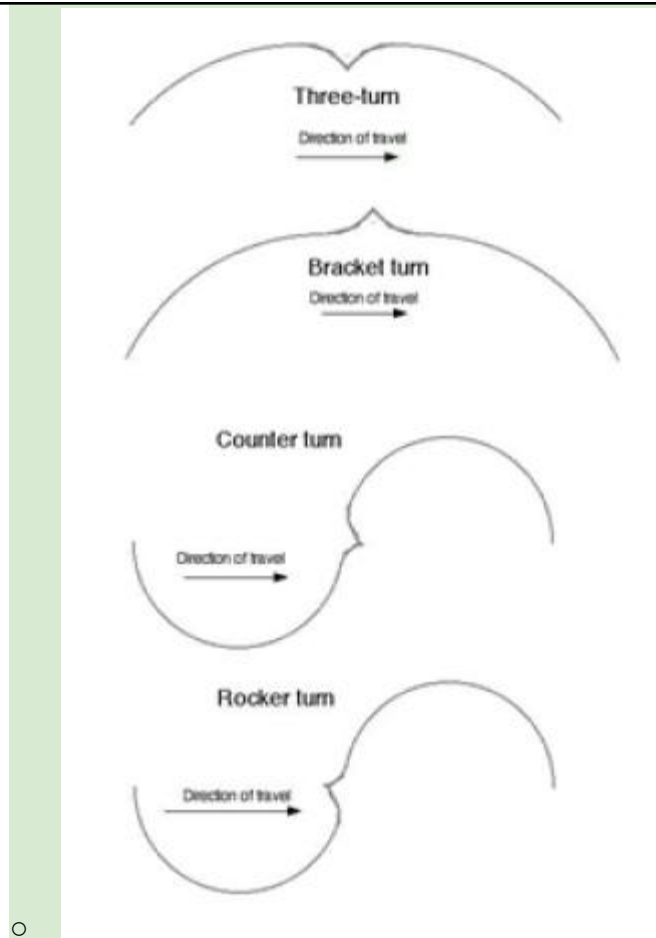
Relationships

Could be cool for them to be able to teach each other moves

Mechanic	Mechanic explanation + features
<u>Skating</u>	<p>At the start of a performance the player character will follow the path of the routine without input, the camera also automatically frames the characters.</p> <p>For infinite generation</p> <p><b>Path types:</b> (movement implemented on player)</p> <p><b>Flow Curve</b></p> <ul style="list-style-type: none"> <li>- Movement continues smoothly along the center line.</li> <li>- No change in facing direction.</li> <li>- Turns: Rocker, Counter</li> <li>- Always on the line.</li> </ul> <p><b>Reflect Curve</b></p> <ul style="list-style-type: none"> <li>- Lateral deviation away from the center line.</li> <li>- 180° facing reversal.</li> <li>- Turns: Three Turn, Bracket</li> <li>- Moves off the line by radius.</li> </ul> <p><b>Straight Segment</b></p> <ul style="list-style-type: none"> <li>- Lateral movement across the center line.</li> <li>- Follows a Reflect to reach the opposite side.</li> <li>- 90° movement relative to previous curve.</li> </ul> <p><b>Actions:</b> (for generation of routine path)</p> <p><b>Flow Action</b></p> <p>Flow curve</p> <p>Movements:heel turn(counter,rocker)</p> <p>Flow → Reflect</p> <p>Flow → Flip</p> <p><b>Reflect Action</b></p> <p>Reflect curve</p> <p>Movements: crossover(forward, back), heel turn(3point, bracket), twizzle,</p> <p>Reflect → Reflect</p> <p>Reflect → Flow</p> <p><b>Straight Action</b></p> <p>A straight path</p> <p>Movements: Spin, Lift, Twizzle</p>



	<p>Straight → Reflect</p> <p><b>Flip Action (formerly “Reset”)</b></p> <p>A Reflect + Reflect sequence.</p> <p>Movements: same as reflect</p> <p>Flip → Flow</p>
<u>Elements</u>	<p>There are 4 types of Elements: <b>Step Sequence, Lifts, Spins, and Twizzles</b></p> <p>Each element is a combination of timed “movements” the player needs to perform</p> <p>players will know what movement to perform using an icon on the ground(<b>Element Notif</b>)</p>
<u>Movements</u>	<p>A movement has three parts:</p> <p>Start:pressing a button of for the correct element</p> <p>middle:Completing a motion on the left stick</p> <p>End: releasing the pressed button</p> <p>Types: start, heel-turn, leg-lift, spin, person-lift, edge-change, jump, lift</p> <ul style="list-style-type: none"> <li>● <b>Start:</b> no motion</li> <li>● <b>Crossover:</b> diagonals <ul style="list-style-type: none"> <li>○ Forward top diagonals</li> <li>○ Backward down diagonals</li> </ul> </li> <li>● <b>heel-turn:</b> half circle</li> </ul>



○

- Counter- cw
- Rocker- ccw
- Bracket turn - ccw
- Three point - cw

- **360:** spin, graded by number of circles
- **2player-lift:** three parts, players coordinate to start and end, and a movement for holding the lift, I want it to be variable by lift, but the current one is a spin.
  - Start: player 1 start a quick time for other player, with lift motion
  - Motion which is **variable**
  - End: player 2 starts a quick time for other player with jump motion
- **Catch:** Out In
  - left-right or right-left
- **2player-Spin:**
  - Start: which is a catch maybe 2 called by player 1
  - Motion which is a **360**
  - End: which may have a flourish called by player 2

	<ul style="list-style-type: none"> <li>• <b>jump:</b> up</li> <li>• <b>lift:</b> down</li> <li>• <b>Lift-transition:</b> half-circle</li> </ul> <p>Some of these motions will be unlocked progressively as they gain new element types</p> <p><b>Resource on Input Buffer:</b> <a href="#">sf6 - input details</a>, <a href="#">buffer implementation</a></p> <p>clarification on PERSON-LIFT:          Leading player will hold down, prompting the second player to hold up, but both have to lift at the same time(might get rid lead needing to lift),</p> <p>The ending will be the same, but the second player presses down instead of up.</p> <p>I considered having the first player having to "balance" but given the multiple lift variations, thought it made more sense to focus on the movement instead</p>
<p><u>Expressions</u></p>	<p><b>Expression Meter:</b> Divided into the <b>three categories</b>, showing how balanced the players' expression is:</p> <ul style="list-style-type: none"> <li>- <b>Connection/self</b>(player prompted)             <ul style="list-style-type: none"> <li>- (sync, guiding, assist moves).</li> <li>- Bring up a quick time for the other player</li> </ul> </li> <li>- <b>Musicality</b>(consistent points in the music)             <ul style="list-style-type: none"> <li>- (timing, accents, dynamic shifts).</li> <li>- Visible on the rink, perform when crossing over them</li> </ul> </li> <li>- <b>Dynamic</b>(random based on audience/judge)             <ul style="list-style-type: none"> <li>- Soft dynamic – Subtle, graceful moves (for Judge-Focused moods).</li> <li>- Notification from judges, goes away after time                     <ul style="list-style-type: none"> <li>- Maybe for a chosen player</li> <li>- Maybe for a specific element or movement</li> </ul> </li> <li>- Bold dynamic – Dramatic, crowd-pleasing moves (for Audience-Focused moods).                     <ul style="list-style-type: none"> <li>- Makes a notification in the crowd, goes away after time                             <ul style="list-style-type: none"> <li>- Any time</li> </ul> </li> </ul> </li> </ul> </li> </ul>

it's easier to increase the meter the more balanced it is.

**keep track of the count and divide by the average difference**

$0 \leq C, M, D \leq 1$

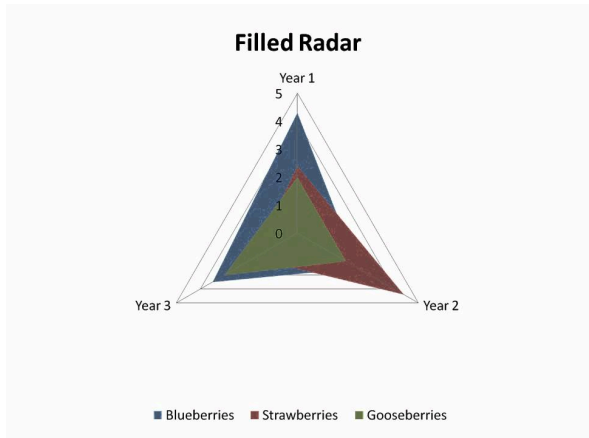
X = count of C, Y = count of M, and Z = count of D,  $0 \leq X, Y, Z \leq 20$

S = Base score (most likely gonna set this as 1/12)

R = proficiency modifier  $1 \leq R \leq 2$

Ex for input X:

$$F(X, R, S) = \frac{S \cdot R}{1 + (X - Y + Z)}$$



**Expression Confidence:**

- Expression gain is affected by their ability
- Ranked: D-A

Expressions can be done at any time but increase the meter more, when done during a movement

**Flow Motion**

Accessible at 4 contribution meter on both sides,  
Spend's 3 contribution meter on both side,

	<p><b>Movements</b></p> <ul style="list-style-type: none"> <li>- Makes motions more lenient,</li> <li>- <b>OR</b> increase point gain,</li> </ul> <p><b>Expressions</b></p> <ul style="list-style-type: none"> <li>- characters could automatically pick the correct one</li> <li>- <b>OR</b> all expression buttons are valid for each type</li> </ul>
<u>Cooperation</u>	<p><b>Tug-of-war system:</b> a 2-directional gauge, with 5 segments on both sides separated by player, for a total of 10 segments, each segment is called "contribution".</p> <ul style="list-style-type: none"> <li>• Each player starts at 3 "contribution" each</li> <li>• both players falling to <b>0 contribution is a fail</b></li> </ul> <p><b>players can fall</b> if they miss an element based on their current "Contribution", the other player can catch or they can themselves</p> <ul style="list-style-type: none"> <li>• want to experiment with catching either requiring the not-falling player to have enough contribution and/or whether it should give the falling player a greater contribution refill</li> </ul> <p>Success full movements</p>
<u>Practice</u>	<p>Each practice day has an amount of time, for now we'll go with 3 hours and each type will take an hour.</p> <p>for now we'll dedicate the last hour to the routine, no matter what.</p> <ul style="list-style-type: none"> <li>• <b>Element Drills:</b> attach stat to element type <ul style="list-style-type: none"> <li>○ manual, amount you get based on how well you do</li> <li>○ each element should get 4 level of drills <ul style="list-style-type: none"> <li>■ tutorial: walks you through each motion required, no point or time cost</li> <li>■ <b>easy*(might not need this one): slower version of element</b></li> <li>■ normal: normal performance</li> <li>■ Full: adds expression requirements</li> <li>■ <b>Infinite: A version that goes on forever</b> <ul style="list-style-type: none"> <li>• Only one where failing is possible</li> </ul> </li> </ul> </li> </ul> </li> </ul>



Multiple Elements per type, you can chose, with reward amount differing between them

The grade you get effects, amount gained, thinking of giving each player 3-4 runs as taking an hour

- **Athletic Drills:** Slower contribution decay or improved recovery from mistakes during performance, or number contribution gauge segments
  - Automatic
  - Spend resource to progress in physical ability, pick expression to focus on for the session
    - Four “**energy**” tokens per character
    - allow them to give one or two of their energy tokens to the other player \
  - Difficulty
    - Tutorial
    - Simple
      - Doesn't have a all movements
    - Normal
      - Adds expressions and has all movements
    - Master
      - Goes on until failure
  - Training categories(Ranked: D-A)
    - Stamina
      - Contribution gauge size
      - Make combo's survive misses
    - Strength
      - Increase contribution gauge gain on elements
      - Make lifts easier
    - Balance
      - Contribution gauge resistance to mess ups
      - Make spins easier
    - Expressions(effect meter gain in that category)
      - Musicality
      - Cohesion
      - Dynamism
- **Routine Test:**
  - manual, can't fall
  - will give them, a grade average to attempt to Get
  - Give some stat rewards

Point system

	<p>We'll grade the start input and the end input of the movement</p> <p><b>Execution Grade of GOE:</b> Since skaters are normally graded by whole-elements, thinking of adding <b>5 levels of thresholds for each element</b></p> <p><b>lvlBase:</b> 4/10, <b>lvl1:</b> 6/10, <b>lvl2:</b> 8/10, <b>lvl3:</b> 9/10, <b>lvl4:</b> 10/10. or something of the like, where <b>each has a different base point amount per movement.</b></p> <p>Points are added only when the element is complete</p> <p><b>combo-count</b> is shared across both players</p> <p>Expression meter <b>is multiplied by 14+bonuses added to your score</b> at the end performance</p> <p><b>Bonuses for: contribution balance, synchronicity</b>(how close your inputs are), <b>technicality</b>(alternating motion-direction), will also apply to the entire score at the end</p> <p><b>Flow Motion</b></p> <p><b>KEY:</b> P for points</p> <p><b>Element Equation=</b> <math>START\_P(BASE\_P * (GOE + COMBO\_MULTI))</math></p> <p>Base points should exceed 15</p> <p>Start points is 1</p> <p>GOE max is 3</p> <p>Combo multiplier max is 1</p> <p><b>Bonuses=</b></p> <p><math>2 * CONTRIBUTION + 2 * SYNCHRONICITY + 2 * TECHNICALITY</math></p> <p>Variables won't exceed a value of 1</p>
<p><b>PRACTICE</b></p> <ul style="list-style-type: none"> <li>Drills will not have Expression Multiplier</li> <li><b>Tests</b></li> </ul> <p><b>PERFORMANCE</b></p> <ul style="list-style-type: none"> <li>Contribution reaching 0 for both players will make them have to restart</li> <li>Less than 3rd is a restart as well</li> </ul>	<p>(B) Mechanic Summary:</p> <p>The 2 comes from the fact that they are scored separately and added</p> <p><b>Expression Multiplier=</b> rewards modified by how well you do</p> <p><math>(14 + BONUS) * (1 + 2/3(COHESION + MUSICALITY + DYNAMISM))</math></p> <p>Right side of * won't be greater than 3</p> <p><b>Score Equation=</b></p>
	<p>(C) Challenge and Failure:</p>

## (D) Player Controls:

Controller Input scheme: [Link to Input Bindings Diagram](#)

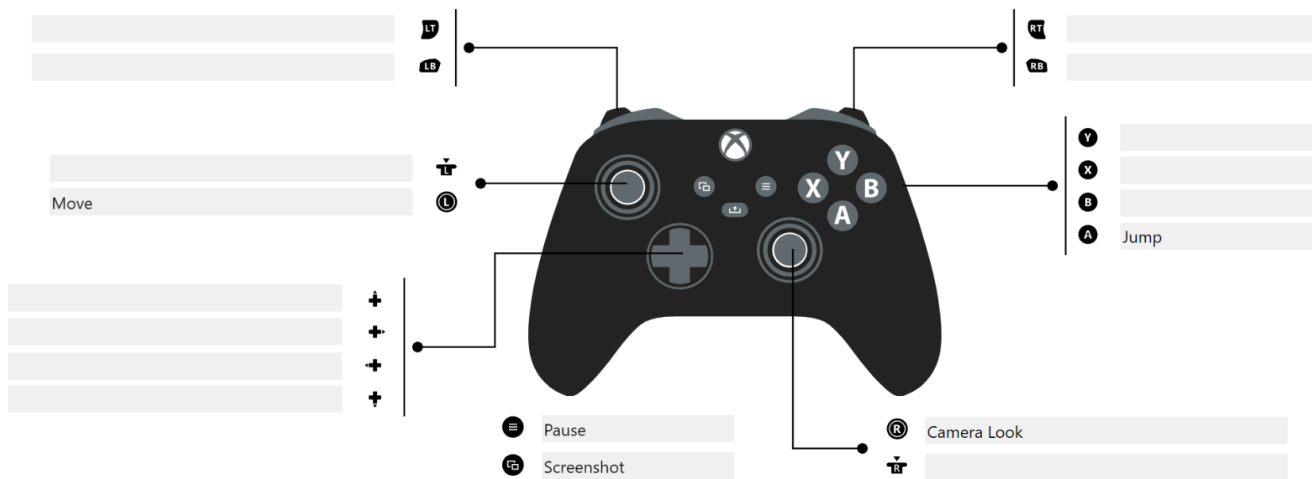
### UNIVERSAL CONTROLS

“Pause” - Esc/Home

“Confirm” - Enter/East face button

“Unconfirm” - Backspace/South face button

### DEFAULT CONTROLS

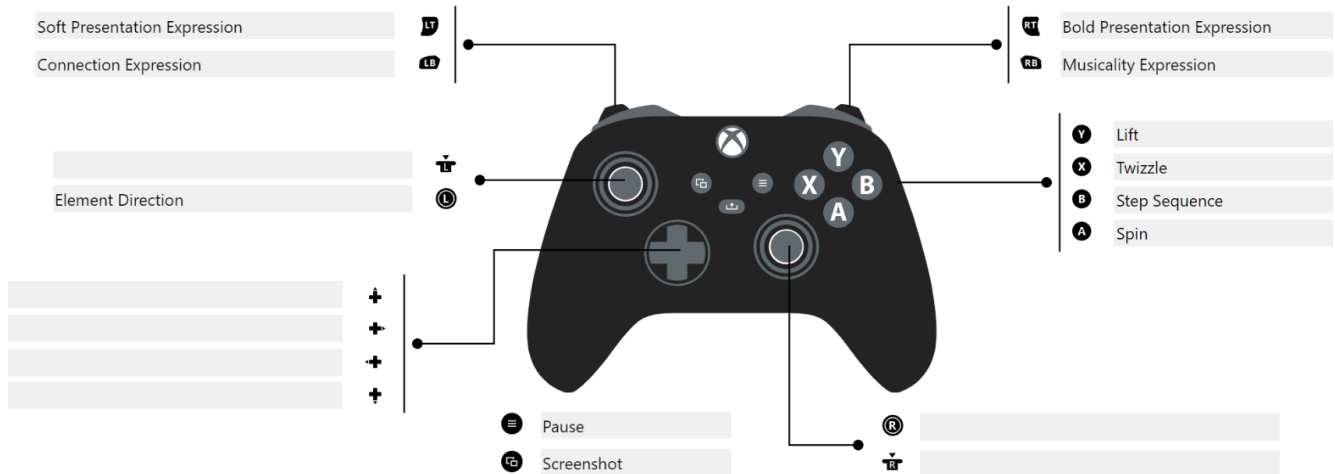


“Jump” - Spacebar/South face button

“Move” - WASD/Left-Stick

“Look” - Mouse/Right-Stick

## ROUTINE CONTROLS



*“Element Type Selection” - QERF/NESW face Button:*  
Lift, StepSequence, Spin, Twizzle

- Player picks element type with button
  - Performs motion input

*“Command Direction” - WASD/Left-Stick*

*“Connection Expression” - LMB, 1/L1*

- Partner-focused expressions (sync, guiding, assist moves).

*“Musicality Expression” - RMB, 2/R1*

- Rhythm-based expressions (timing, accents, dynamic shifts).

*“Soft dynamic Expression” - L-shift, 3/L2*

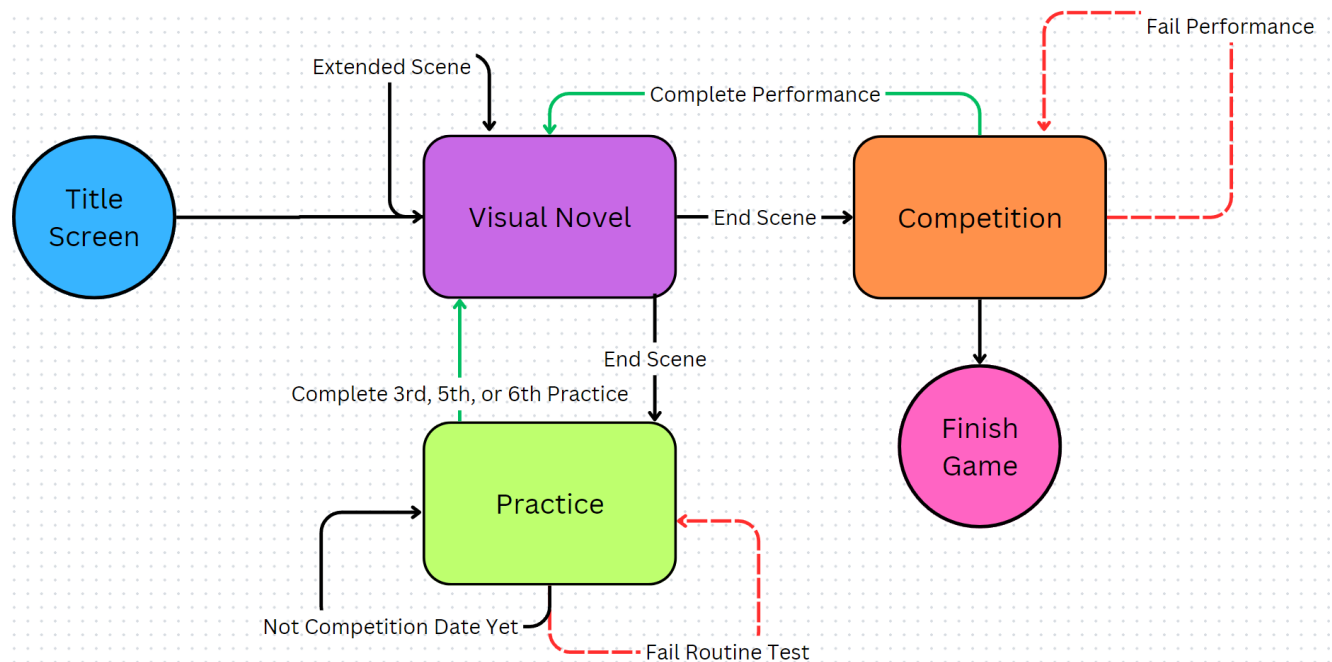
- Subtle, graceful moves (for Judge-Focused moods).

*“Bold dynamic Expression” - Spacebar, 4/R2*

- Dramatic, crowd-pleasing moves (for Audience-Focused moods).

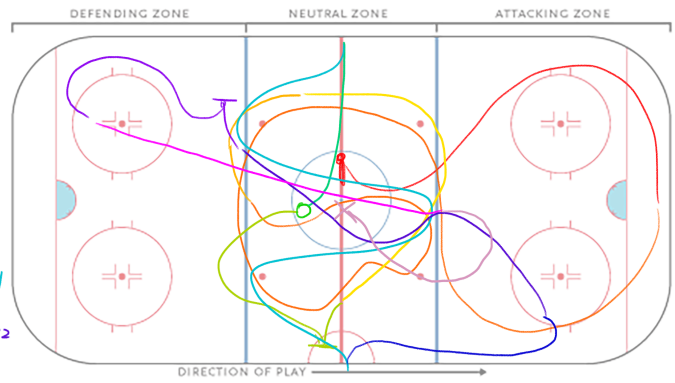
# 5: Levels/Environment Design

(A) Level Structure:



Levels	key features and objectives.
<b>Practice</b>	<i>Decide on location in rink of each practice screen:</i> <ul style="list-style-type: none"><li>• Entry</li><li>• Element drill</li><li>• Athletic drill</li><li>• Routine</li></ul>
<b>Competition</b>	Lobby area Main rink

- 0-:20  
 - :30-:38 SS  
 - :38-:41  
 - :41-:49 CL  
 - :49-1:00  
 - 1:00-1:21 Spn  
 - 1:21-1:27  
 - 1:27-1:51 Fony  
 - 1:51-1:35  
 - 1:35-2:07 Tw2  
 - 2:07-2:18  
 - 2:18-2:25 SLL  
 - 2:25-2:41 End



Judges

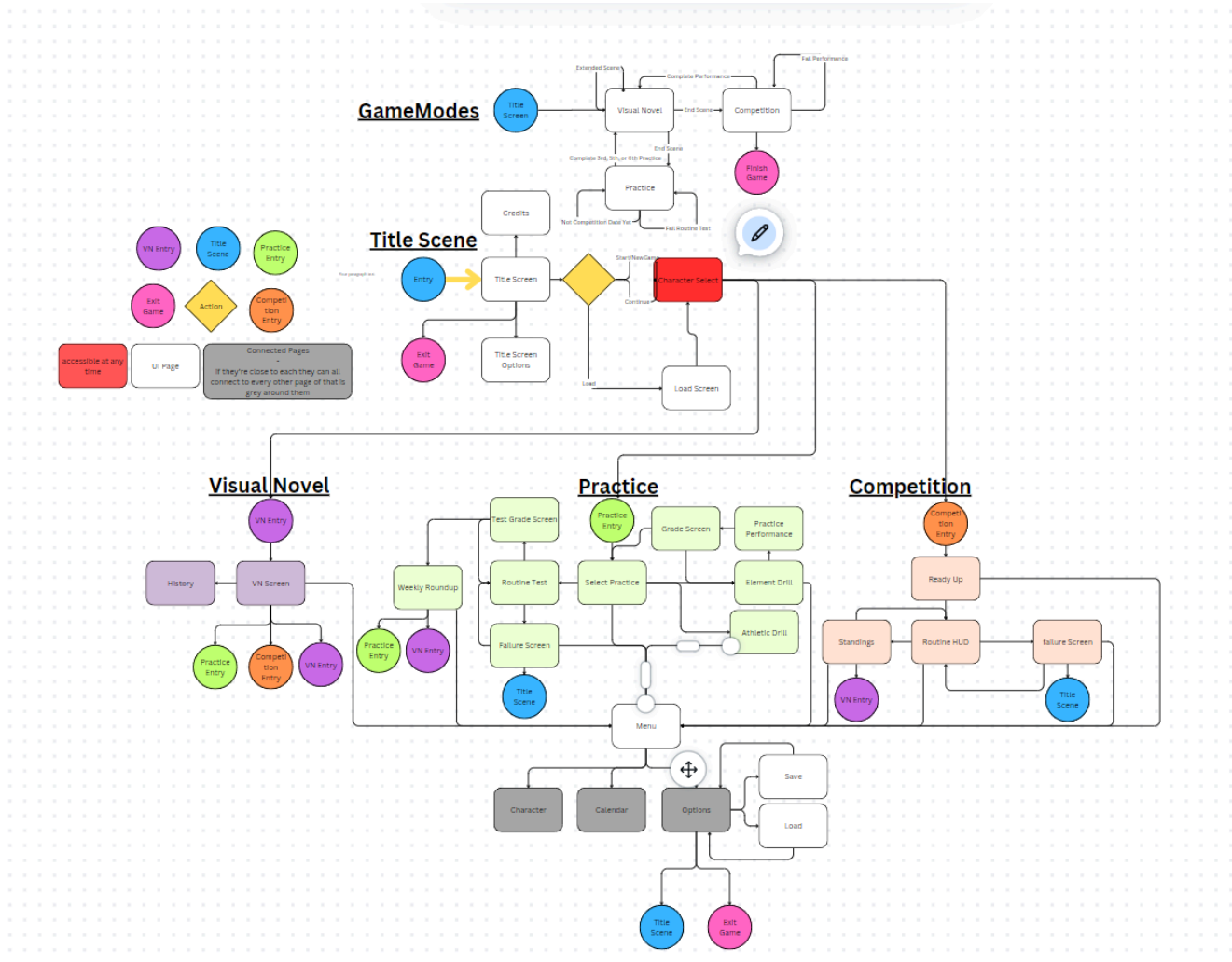
*Stands, and Judges*

## 6: User Interface

UI Examples: [Link to Game UI Database](#)

Color Palette: [Link to color palette](#)

(A) UI screen flow:(Click for image to open page)



## (B) RULES:

### Headers

- Centered for descriptions("ready up!")
- Left Aligned for pages

### Controls Prompts

- Bottom Right

## (C) UI screen pages: main widget classes are bolded

### SYSTEM MENUS - [Diagram](#)

- **Title Screen**
  - Title text
  - Buttons
    - *Start*
      - *Replace with:*
        - *New*
        - *Continue*
        - *Saves*
    - *Credits*
    - *Options*
      - *This is a version of the pause menu with only the options tab*
    - *Exit*
- **Connect Controller page**
  - Controller Binder
  - Character Portrait
  - Control Hud

### PAUSE MENU - [Diagram](#)

Each page will be a tab

- **Character**
  - Control diagram
  - Character Condition Page
  - Could have a profile of things like height, likes, or a bio
- **Options**
  - System
    - Save - Button
      - Require confirm to delete
    - Load - Button
      - Require Confirm to load and to delete
    - Return to title - Button(confirm)
    - Return to desktop - Button(confirm)
  - Screen
    - Fullscreen - Dropdown - **CALLED COMBO BOX**
    - Resolution - Dropdown
    - V-Sync - Toggle
    - Graphics if we put those in settings
  - Sound



- Volume separated by type of source
    - Master - Slider
    - Music - Slider
    - Sound effects - Slider
  - Text
    - Text Speed - Int Slider
    - Auto Text Speed - Int Slider
  - Controls
    - No rebinding, just image of controls
    - Allow them to change controller Icon's for player
- **Calendar**
  - Time of day - icon
  - Week number
  - Practice Calendar
  - Days till competition Header

## COMPETITION - [Diagram](#)

- **Ready Up page**
  - Controls
  - Ready up
- **Routine HUD**
  - Element wheel
  - State Hud
    - Time
    - Current Score
    - Target Score
  - Contribution Gauge
  - Element Grade Notification
  - Expression Notification
  - World UI
    - Dance path
    - Upcoming movement ground icon
- **Fail**
  - Game over text
  - Buttons
    - *Retry*
    - *Title*
    - *Options*
- **Competition Completion Screen**
  - Expression Chart

- Standings
- Continue button

## PRACTICE - [Diagram](#)

- **Select Practice**

- Time Left Gauge
- Practice selection
  - Element drill - button
  - athletic drill - button
  - Routine Test
- Calendar
  - Mini-calendar
  - Week hud

- **Element Drills**

- Element Selection Page
  - One for each type
  - Last one is basic movements
- Drill Information
  - Title
  - Length
  - Description
- Grade thresholds
- Movement Diagrams
  - Every motion required for the Drills

- **Performance Description Screen**

- Routine Name
- Element Selection
- Movements in the performance
  - Movement HUD
    - Video example
    - Graphic of the motion
- Difficulty, and time Label
- Performance Objectives
  - Expression
  - Element

- **Grade Screen(For element practice and routine Test)**

- Overall Grade
- Sub-grades for each Character
- Routine title
- if applicable

- Passed text
  - Reward to Stats
- **Stamina/Endurance Drills**
  - Character Selection Page
    - Buttons for both characters
  - Expression alignment chart
  - Exercise Focus
- **Routine Performance Description Screen**
  - Description of what they are being tested on
  - Grade requirements
- **Routine Grade Screen**
  - **Just the element grade with a passed or not**
- **Daily Wrap up**
  - Expression progress
  - Daily Grade
  - Mini-calendar
  - Artwork

## TUTORIAL - [Diagram](#)

- **tutorial pop-ups**
  - Tutorial title
  - Content
    - Image
    - text
  - Page number
  - controls
- **tutorial with dialogue pop-up**
- **Checklist Hud**
  - Tutorial name
  - Checklist
    - Checkbox
    - Task text

## VISUAL NOVEL

- **Week Hud**
  - **Time of day**
    - Icon
    - text
  - **Week number text**
- **Text Hud**

- Content
  - Text
  - Character
- Skip
  - button
- Speed
  - button
- Auto
  - button
- Bring up whole conversation so far
  - Button
- Control Buttons
  - History
  - Autoplay
  - Menu
- Conversation So far page
  - Content
    - Text
    - Scroll bar
    - background

## 7: Art Style

### (A) Character Art:

Want to aim for a realistic style if it is achievable

- Concept arting
- Metahumans
- Creating clothes in Marvelous Designer?
- Hair cards or grooming
- Texturing
- Animating/Motion capture
- Learning cloth/hair simulation in Unreal

### (B) Environmental Art:



We don't need the lines cause

olympic style ice rinks don't have them



Props:



(optional)

Lighting:



I like these dark blue shots even if it isn't very realistic since normally ice rinks are very evenly lit

Skating should have a trail on the skates, kick of ice particles,

**Game Objects:**

Object class	
3D Character num:	<div>1. Alexandra Adu</div> <div>2. Damien Bardon</div> <div>3. Crowd:<div>a.</div></div>
2D Character num:	<div>1. Alexandra Adu</div> <div>2. Damien Bardon</div> <div>3. Ahyeon Adu</div>

	4. CHARLES Adu 5. Caroline Park 6. Nicolas Olivas
3D environmental assets  num:	<i>Performance Ice Rink</i> <ul style="list-style-type: none"> <li>•</li> </ul> <i>Practice Ice Rink</i> <ul style="list-style-type: none"> <li>•</li> </ul>
2D background environments	<ul style="list-style-type: none"> <li>• Stoneville Skating Rink</li> <li>• Stoneville High School</li> <li>• Adu Residence</li> <li>• Damien's Apartment</li> <li>• Regional Competition Arenas</li> <li>• National Competition Arena</li> </ul>

### (C) Animations:

#### **PRACTICE ANIMATIONS**

##### **Looping animation: ideally with the same radius, OR straight**

1. Heel-turn (down the line)
2. Crossover (circles)
3. Generic Lift (not a full element just the semantic meaning, should include the carried doing something active tho, like the one that had her shifting position)
4. Generic Spin (one where they're holding on to each other)
5. 360/twizzle spin (down the line)
  - Intro to ice animation
    - Practice
    - Competition
    - Last Competition
  - Celebration on skates animation
    - Practice
    - Competition
    - Last Competition
  - Disappointment on skates animation after performance
    - Practice
    - Competition

- Disappointment after fall

## **GAMEPLAY ANIMATIONS**

1. stumble on skates animation ( should be able to branch into a full fall or a regain balance)
2. Expressions
3. Elements
  - a. step sequence
  - b. curved lift
  - c. spin
  - d. dramatic choreo
  - e. twizzle
  - f. straight line lift

## **STRETCH ANIMATIONS**

Short animations to represent practicing balance, strength and stamina training(no longer then 5 seconds)



## **8: Music/Sound**

Include links to music and sound design similar to What you're trying to achieve. You can also list the emotional responses that the sound should invoke in the player.

## **9: Development Roadmap / Launch Criteria**

Milestone 1: February 22

- Core Game Systems put in the context of a practice
  - ~~Cooperation~~
  - Expression
  - Movements
- ~~tutorial pop-ups system~~
- one element practice
- Script rewrite
- ~~Have metahuman characters~~
- ~~Have 3d competition outfits~~
- Have all characters designed
- Finalized list of all expressions/poses/outfits/backgrounds to draw
- ~~Dynamic data table for visual novel created and tested~~
- ~~Start menu functionality fully implemented~~
- UI design/redesign/formatting (game menu, start screen)
- ~~Test Calendar Animation created and Added~~

Milestone 2: March 9

- add Game feel to mechanics
  - particle fx
  - Sound fx
- core operational systems
  - Calendar
  - saving
  - Allowing multiple controller input
- add tutorial section
- 2 more element practices
- Finalized script
- Have all outfits in 3d
- Poses, outfits, and expressions for Alex and Damien, maybe special illustrations for major scenes
- Fix metahuman hair and any other adjustments
- Separate Visual Novel controller functionality
- Finalized script added to visual novel
- Visual Novel animations/transitions added

- Work on the 3D environment
- Car Visual Novel Design and Implementation

### Milestone 3: March 24

- 2 competitions and 2 practices
- Have fully lit 3D environments
- Have background characters
- Poses, outfits, and expressions for supporting characters
- Backgrounds for each scene
- Visual Novel fully technically functional
- Soundtrack created

### By April (final Milestone/full list):

- 9 practices, 3 competitions- 3 practices per competition
- Full story- switching between gameplay and visual novel
- Illustrated backgrounds and characters, switching between expressions and poses to match with dialogue / script
- Special illustrations
- SFX/VFX/Leitmotif
- ~~Animations from motion capture affected(?) by player input like falling or stumble?~~
- Custom clothing for competitions and practices
- All visual and audio aspects are added to visual novel