**Thrill Runner**

Game Design Document

Afbeelding met tekst, sprong, wolkenkrabber, buitenshuis

Door AI gegenereerde inhoud is mogelijk onjuist.

Written by: Tycho Klaver

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# Introduction

This Game Design Document describes the concept, the gameplay mechanics, the visual style and the technical specifications of the Thrill Runner project. The goal of this document is to set a clear vision for the developmental process of the game.

Thrill Runner is a 3D platformer/parkour adventure which is aimed at young people who love a skill-based game and challenges. The game offers players an experience that encourages them to think strategically about their choices.

This document serves to substantiate the choices made in development. Both creative and technical aspects are explained, from gameplay and level design to UI and technical requirements.

# Overview

|  |  |
| --- | --- |
| **Game Title:** | **Thrill Runner** |
| **Genre:** | **3D Platformer/Parkour Adventure** |
| **Theme:** | **Urban/Organic** |
| **Perspective/View:** | **Third-Person Follow** |
| **Game Purpose:** | **To provide a challenging movement experience.** |
| **Art Style:** | **Minimalist Realistic** |
| **Originality/USP:** | **The game has two complementary modes, that being freedom and challenge. The combination of an open-world free-roam arena and structured levels allows players to experiment freely and test their skills in defined challenges. The player can also choose between tricks by means of an interactive wheel.** |
| **Short Summary:** | **A third-person parkour game where players can develop their skills in a free-form open-world arena or challenging levels, navigating from point A to point B. The focus is on fluid movement, creativity and perfecting parkour techniques.** |

# Configuration/ Technical Specs

## Hardware

|  |  |
| --- | --- |
| Device | Requirements |
| Platform | PC (Windows 11) |
| Processor (CPU): | Intel Core i7-13650HX |
| GPU: | NVIDIA GeForce RTX |
| RAM: | 16GB |
| Storage Space: | 10GB Disk Space |
| Other: | Keyboard & Mouse |

# Software

|  |  |
| --- | --- |
| *Software* | *Notes* |
| Windows 11 | The Operating System on which the game is developed. |
| Unity | The game is developed in Unity, specifically version 2022.3.62f1. |
| Neovim | Used for coding the scripts. |

# Game Elements

## Key Features

**Two Play Modes –** Choose between a **free-form open-world arena** for casual parkour and tricks, or a **level-based mode** where you must navigate from point A to B via challenging courses.

**Third Person Follow Camera –** A **fluid third-person camera** that follows the player from behind, like **Skate 3**, providing overview and dynamic movement.

**Skill-Based Parkour Movement –** A deep movement system featuring **jumping, climbing, wallruns, vaults** and **flips,** where precision and timing are crucial.

**Flow and Creativity as Key Focus –** Players are encouraged to **find their own routes** and **combine moves** to create a unique playstyle, without forced paths.

**Progressive Difficulty Curve –** Levels and challenges **gradually become more difficult,** providing a natural learning process and increasingly greater rewards for skill.

## Game Mechanics

**Movement Mechanics**

* **Sprinting, Jumping, Climbing, Wallrunning, Vaults, Slides, Flips**
* **Momentum-Based System:** Speed and fluid movements affect jump distance and climbing speed.

**Navigation Mechanics**

* Get from point A to point B in the fastest or most stylish way possible.
* **Free Roam** option in the arena with optional objectives.

**Combo & Trick System**

* Combine movements (e.g., wallrun -> vault -> flip) for higher scores or style points.

**Time Trials & Leaderboards**

* Levels can be played as time trials with leaderboards for competition and improving personal records.

**Camera Mechanics**

* Smooth follow camera with a slight delay and swing for a natural and dynamic view.
* Optional dynamic zoom-out during fast movements or large jumps.

# Player Movement

## Standard Movement(s)

* **Walking & Sprinting**

The player can walk normally and sprint using a dedicated button. Sprinting is essential for building momentum to jump further or reach higher objects.

* **Jumping**

The player can jump from a standstill or with momentum. The height and distance of a jump are influenced by the player's speed and timing.

* **Climbing**

The player can grab edges and pull themselves up to reach higher platforms. This works automatically when the player jumps close to a climbable object.

* **Ground Rolls/Soft Landing**

After a fall from a considerable height, the player can perform a roll upon landing to avoid damage and maintain momentum.

## Special Movement(s)

* **Wallrun**

The player can run against flat walls and remain running horizontally or vertically for a short period. Useful for crossing wide gaps or reaching higher platforms.

* **Vaults**

The player can quickly jump over low obstacles with a smooth vaulting motion, maintaining momentum.

* **Slides**

At high speed, the player can slide under low obstacles or glide to quickly move through narrow spaces.

* **Flips & Tricks**

The player can perform flips or trick movements during jumps. These do not provide direct gameplay advantages but increase the player's style score or flow.

* **Wall Climb Boost**

The player can briefly boost themselves upward against a wall after a wallrun to reach an extra platform that would otherwise be too high.

## Movement Combinations & Navigation

* **Combining Moves for Flow**

The player is encouraged to smartly combine movements for maximum flow. For example: Sprint -> Wallrun -> Vault -> Flip -> Roll.

* **Reaching Hard-to-Access Locations**

Special movements like wallruns, vaults, and wall climb boosts are crucial for reaching hidden routes, quick shortcuts, and hard-to-reach places.

* **Momentum & Timing**

Many movements depend on built-up speed and good timing. This creates a natural learning process where the player gradually learns to navigate more smoothly.

# User Interface

## Menu Flow

**Start Screen -> Main Menu -> Game Mode Selection-> Settings -> In-Game Menu -> Pause Menu -> End Screen (results/retry)**

The player starts at the Start Screen and navigates to the Main Menu. From there, the player can choose between game modes, adjust settings, or start the game directly.

## Main Menu

**Buttons:**

* **Play**

Leads to the choice between Open World Arena or Level Mode.

* **Settings**

Graphics Settings, Controls, Audio

* **Controls Overview**

Visual overview of the controls.

* **Exit Game**

**UI Layout:**

* Minimalistic layout with large, clear buttons centered on the screen.
* Simple background animation.

## In Game UI (HUD)

**Elements:**

* **Speed Meter**

Bottom-left, shows current speed (important for momentum-based gameplay.)

* **Trick Combo Indicator**

Top-left, shows the current trick combination and flow status.

* **Objective Marker**

Lightly transparent, top-center of the screen. Provides direction for Point A -> B levels.

* **Timer**

Top-right in Time Trial levels, showing the best time and current time.

* **Minimalistic Health/Impact Indicator**

Visible only during hard falls or mistakes.

**UI Style:**

* Clean and subtle, with thin lines and transparent backgrounds.
* Not too busy, so the player maintains focus on the environment.

## In Game Menu

**Buttons:**

* Resume Game
* Restart Level / Return to Arena
* Settings (Audio, Controls, Graphics)
* Return to Main Menu

**UI Layout:**

* Simple overlay with a dimming effect on the gameplay background.
* Menu structure centered, with a large, readable font.

## Hints/ Tips

**Contextual Tips:**

* Short pop-ups for new moves (“Press Shift while running to Slide”) in the first few levels.
* Position: bottom-right, small and unobtrusive.
* Tips disappear automatically or after player input.

**Loading Screen Tips:**

* During loading screens, simple text tips about controls, tricks and flow combinations.

# Level Elements

## Obstacles

* **Low Walls & Rails**

Obstacles that the player can vault over or slide under.

* **High Walls & Platform Edges**

Require climbing or wallruns to progress

* **Wide Gaps & Jumps**

Force the player to jump with enough momentum.

* **Narrow Ledges & Beams**

For precision movements and balance exercises.

* **Sloping Walls & Wallrun Surfaces**

Provide opportunities for wallrunning and vertical boosts.

* **Moving Objects**

Platforms or swinging obstacles that require timing.

* **Trick Zones**

Specific areas designed for cool trick combos and style points.

## Missions/Quests

**Main Objectives (Required)**

* **Level Mode:**
  + **Goal:** Reach from Point A to Point B
  + Always required to complete the level.
  + Players are judged on time and style score.
* **Open World Arena:**
  + No fixed end goal.
  + Freely explore and train with optional sub-goals.

**Optional Missions & Challenges**

* **Time Trials**

Challenge yourself to set the fastest time.

* **Combo Challenges**

Perform specific trick combinations at prescribed locations.

* **Hidden Collectibles**

Find and reach hard-to-access items hidden in the level environment.

* **Flow Challenges:**

Achieve a smooth combo pattern within a time limit for extra rewards.

## Level Structure

**Start Phase –** The player starts at a starting platform with visual cues directing them to the goal.

**Navigation & Obstacle Phase –** The player navigates through obstacles, uses parkour mechanics, and chooses their own routes.

**Flow & Tricks –** The player is challenged to combine movements for style points and speed.

**End Points –** Upon arrival, an end screen appears with results: Time and Style Score.

## Variations of Level Structure

**Exploration Mode (Open World Arena)** – No time limit or end goal, fully focused on free parkour and self-chosen challenges.

**Special Challenge Levels –** Levels focused on a specific mechanic, such as only wallruns or pure speed without tricks.

**Freestyle Flow Zones –** Open levels with no fixed route, focused on creating the longest combos.

# Levels

## Level 1: Rooftop Rush

### Level Layout Description

Level 1 takes place in a densely built-up city, where the player navigates from point A to point B by running across rooftops, fire escapes, and narrow balconies. The level features multiple height layers and offers the player different routes: safe but slow, or risky but fast.

**Start Point:** Low rooftop in an alleyway.

**Route:** From low rooftops, using climbing objects to reach higher skyscrapers.

**End Point:** Large helipad on one of the tallest buildings.

### Level Variation

* Linear sections with fixed jumping and climbing routes.
* Open sections with route freedom (free-flow combos).
* Changing heights force the player to alternate between horizontal parkour and vertical climbing skills.

### Setting

* Modern city at sunset.
* Warm orange glow with long shadows.
* Dynamic wind and dust particles for atmosphere.
* Distant street noises but focus on calmness and flow on the rooftops.

### Special Locations

* Abandoned construction scaffolding with many moving elements (planks, cranes).
* Neon-lit billboards that the player can run across.
* Glass walkway that quickly breaks when the player sprints over it.

### Unique Feature for This Level

* **Introduction of Wallruns**

This is the first level where the player learns wallrunning and needs it to progress.

* Rewards for risky shortcuts that yield high style points.

### Level Goals

* Learn to combine sprint, jump, climb, and wallrun.
* Achieve flow combos across rooftops and urban obstacles.
* Reach the end platform within a certain time (time trial).

### Level-Specific Achievements

* “**Roof King**”: Reach the endpoint without ever stopping (always keep moving).
* “**Risk Runner**”: Use only the hardest and fastest routes.
* “**First Wallrun**”: Successfully perform the first wallrun in the tutorial section.

## Level 2: Urban Flow

### Level Layout Description

Level 2 takes place in a typical urban shopping district with narrow alleys, plazas, and parking garages. The player moves between street level and low-rise structures (think containers, benches, low walls, and bike racks). This level focuses on fast, fluid movements without extreme heights.

**Start Point:** Street corner near a small city park.

**Route:** Through narrow alleys, over low obstacles, and via stairs and short climbs.

**End Point:** On top of a small parking garage (2-3 stories high).

### Level Variation

* Alternating between narrow corridors (requiring precision) and open plazas for freestyle combos.
* Obstacles in quick succession (bench -> wall -> handrail -> container) to train flow and timing.
* Alternative routes through courtyards and back doors for observant players.

### Setting

* Everyday urban scenery: brick buildings, graffiti, dumpsters, bike racks.
* The atmosphere of a living city, with subtle background sounds (birds, traffic, distant pedestrians).
* Bright morning sun for a fresh, energetic feel.

### Special Locations

* Schoolyard with benches and a sports field (perfect for trick combos).
* Open parking garage with low walls and rails to slide under.
* Courtyard with walls ideal for vaults and precision jumps.

### Unique Feature for This Level

* **Introduction of Slide Moves**

The player learns to slide under low obstacles and combine these into flow combos.

* Focus on low-speed techniques and small-scale freerunning.

### Level Goals

* Learn to switch between precision movement and fluid combos.
* Practice anticipating obstacle sequences.
* Reach the parking garage within the given time.
* Freedom to choose creative routes (smooth flow is rewarded).

### Level-Specific Achievements

* “**Street Master**”: Reach the endpoint without going higher than 3 meters above street level.
* “**Slide Pro**”: Perform 10 slides in a single playthrough of this level.
* “**Freestyle Local**”: Achieve a flow combo of at least 20 moves without stopping.

# Modes

## Tutorial Mode

### Goal & Value

* This mode introduces the basic movements of the game (running, jumping, climbing, vaults, wallruns, slides).
* Gives the player the opportunity to practice in a safe and controlled environment without time pressure or penalties.
* Important for teaching the flow of movements before the player faces more difficult challenges.

### Limitations

* No time limits or scores.
* Confined and simple environment (no distracting obstacles).
* Progression is linear: the player only moves on to the next area after successfully performing a technique.

### Unique Feature

* Full focus on learning and mastering mechanics.
* Visual guides and slow-motion replays of correct moves.
* Ideal for new players with no prior experience in parkour games.

## Campaign Mode (Level Mode)

### Goal & Value

* Provides structured level challenges where the player must navigate from Point A to Point B.
* Tests the player’s skills under time pressure with scoring for style and flow.
* Creates a sense of progression through increasingly difficult levels introducing new mechanics.

### Limitations

* The route is mostly fixed, with limited free exploration.
* Time limits and combo-breakers add extra challenge.
* Mistakes or falls can lead to respawns or penalties.

### Unique Feature

* Focused on improving speed and efficiency.
* Levels are designed to test specific skills and combos.
* Leaderboards and medals (bronze, silver, gold) for replayability.

## Open World Arena

### Goal & Value

* Free exploration of a large arena filled with obstacles and trick zones.
* Players can creatively train and invent their own flow combos without time limits.
* Ideal for practicing and breaking personal records (longest combo, highest score).

### Limitation

* No fixed end goals or progression.
* No storyline or predefined routes.
* Score and performance are optional (for players who want to improve).

### Unique Feature

* Complete freedom and self-expression in movement and tricks.
* Includes “spontaneous challenges” (e.g., time trials, combo zones) for those seeking extra challenge.
* Perfect mode for casual play and training.

# Player Performance/Achievement

## Data Storage

* All achievements and performance records are saved in a local player profile (for example, as a JSON file) per player.
* The following data is tracked per profile:
  + **Unlocked Achievements (**with date and time**).**
  + **High scores & fastest times** per level**.**
  + **Flow Combo Records (**longest combo, style points**).**
* Optionally, cloud sync can be used (e.g., via Steam Cloud) for backups and cross-device storage.

## Encryption

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## Condition Checking

* During gameplay, real-time checks are performed to determine if the player meets an achievement condition.
* Examples:
  + **Flow Checks:** Counts if the player performs a combo without stopping.
  + **Level Timers:** Checks if the level is completed within a certain time.
  + **Special Moves:** Tracks the use of slides, wallruns, etc.
* Event-driven system: Specific actions (e.g., trick landings, checkpoints) trigger events that check achievements.
* When an achievement is unlocked, this is immediately shown visually (popup, sound) and saved.

## Statistics Display.

* In the **Main Menu > Profile section**, players can view their statistics:
  + Total number of achievements unlocked.
  + Per level: best time, highest combo, highest style score.
  + Personal records and progress overview.
* During gameplay, recent achievements can be displayed in the pause menu overlay.
* When a new achievement is unlocked, an in-game popup appears (top right) with name, icon, and short description.

# Input/Control scheme

## Standard Movement

* **WASD**: Moves the character in the desired direction.
* **Sprinting**: Hold Shift to sprint.
* **Crouch/Slide (at speed)**: C to crouch. When moving at high speed, this automatically becomes a slide.

## Looking Around

* **Mouse Movement:** Controls the camera (third-person view).

## Jumping/Vaulting

* **Spacebar:** Jump and vault over low obstacles.
* **Timing-sensitive:** If the player jumps just before an obstacle, a vault animation is triggered.

## Wallrun & Wallclimb

* **Wallrun:** Sprint towards a wall + move towards it to automatically start wallrunning.
* **Wallclimb:** Jump Key near a wall + towards the wall for a short wallclimb on higher surfaces.

## Special Movements

* **Precision Landing:** Ctrl for a controlled landing without losing momentum.
* **Manual Grab:** E to manually grab ledges or rails.

## Trick/Style Moves:

* **Style Modifier (for flips, spins):** Q combined with directional keys.

Allows the player to perform flips and spins during jumps for extra style points.

## Interaction/Restart

* **R:** For interacting with objects or instantly restarting after a fail.

# Story/ Scenario/ Synopsis/ Lore

## World Background

The game is set in “Nexon City”, a futuristic metropolis that was once a symbol of freedom and creativity. The city was designed with vast open spaces, rooftops filled with art installations, and parks suspended between skyscrapers. What started as a playground for artists, freerunners, and skaters has been taken over by corporate giants, cluttered with restrictions, advertisements, and access bans.

However, beneath the surface, an underground community of urban athletes has emerged. Their goal: reclaim the city through movement, tricks, and style. By turning the urban jungle into their personal canvas, they show that Nexon City still belongs to the people.

## World Progression

* At the start of the game, Nexon City feels sterile and heavily regulated. Barriers, fences, and surveillance drones are omnipresent, keeping tight control over the urban environment.
* As the player successfully completes more levels and challenges, the city gradually transforms:
  + Graffiti murals start appearing on once grey, lifeless walls.
  + Blocked routes are unlocked, offering new paths and shortcuts.
  + Crowds of spectators gather around trick zones, cheering on urban athletes.
  + The overall atmosphere becomes more vibrant and colorful – shifting from cold corporate control to a lively urban playground.
* Through the player’s actions, Nexon City slowly reclaims its identity as a space for creativity, freedom, and movement.

## Main Character Background

You play as Kaze, a young freerunner born and raised in the outskirts of Nexon City. From narrow alleyways to towering skyscrapers, Kaze has learned to navigate the urban jungle with creativity and flow.

Kaze’s motivation isn’t rooted in rebellion or destruction, but in restoring the city’s soul. By completing runs and performing smooth, expressive moves, Kaze aims to inspire others to see the city not as a cage of restrictions, but as a playground of possibilities.

* **Personality:** Determined, playful, resourceful.
* **Style:** A mix of casual streetwear and functional parkour gear, combining comfort with urban flair.
* **Relationships:** A core member of “The Flow”, an underground crew of urban athletes dedicated to reclaiming Nexon City from corporate control through movement and art.

## Factions & Groups

* **The Flow:** Kaze’s crew of parkour artists, freerunners, and urban explorers. Constantly pushing each other to master harder tricks and more challenging routes, The Flow embodies freedom of movement and creative expression in the urban landscape.
* **CORPOSEC:** A private security firm working together with corporate giants to keep Nexon City ”safe and orderly.” CORPOSEC enforces control through surveillance drones, security barriers, and constant monitoring, turning public spaces into regulated zones.
* **Civilians:** The everyday residents of Nexon City. Initially passive, they become increasingly inspired by Kaze’s actions. As the player progresses, civilian support becomes visible – from cheering crowds at trick zones to murals and street art reclaiming the corporate-dominated skyline.

## Key Locations/Points of Interest

* **Skyline Gardens:** Rooftop gardens scattered across the city skyline, hiding secret routes and perfect trick spots. A peaceful contrast to the urban jungle, yet a playground for skilled freerunners.
* **The Old Factory:** An abandoned industrial complex turned underground training ground for The Flow. Packed with makeshift obstacles, moving platforms, and challenging vertical routes.
* **Neon Plaza:** The commercial heart of Nexon City. Bright billboards, crowded walkways, and layered architecture make this a high-visibility spot for showing off tricks in front of large crowds.
* **The Loop:** An intricate metro network with hidden freerun paths running above and below ground. The Loop connects distant districts and offers fast-paced, technical routes for advanced players.
* **The Spire:** A colossal tower dominating the city skyline. Considered the ultimate challenge for any freerunner, The Spire is the final goal – a vertical gauntlet of skill, speed and style.