COSC 416 - Group 33

Game Title
Summit Rush

Team Name
Concordia Studio

Team Members
Alrick Vincent (40882714)
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Core Concept

Inspired by the classic arcade title *Ice Climber*, *Summit Rush* is a 2D platformer where players must scale a 'mountain' while avoiding environmental hazards and engaging in strategic movement-based challenges. The game introduces dynamic platforms and platforming that tests precision and timing. The player controls a lone mountain climber. The game includes a final enemy that will chase the player to the summit.

Core Gameplay

The game is centered around Room -> Level progression, requiring players to beat a series of Rooms in a level to finish the level. Some rooms require the player to collect all items before progressing to the next. Levels mostly increase in difficulty. Players must time their jumps carefully as platforms may break under timed use. Hazards like spikes, falling icicles, and moving enemies add an extra layer of difficulty. The final level introduces our main twist: a shadow doppelganger enemy that chases the player. The climbing physics are tightly designed to allow quick reactions and precision-based movement, ensuring a responsive and satisfying platforming experience.

We understand *Ice Climber* is a more combat- and score- based vertical platformer that involves breaking blocks and killing enemies. We opted to go for a more movement based game. We thought *Ice Climber* was quite slow and boring, so we decided to make the gameplay loop a lot faster and more fun. We made the game have fast respawns and lots of tight, responsive movement mechanics to make the game more fun, and more rewarding as you get better at the game. So, we opted to make it less interaction based and just movement based. This means we did not include the mallet, so there are no breaking blocks and killing enemies. We also decided that instead of moving platforms, we would add falling platforms as our game would be more timing and movement based. Although we are missing a mechanic and altered one, we added several other movement mechanics to make up for this discrepancy.

Mechanics in *Summit Rush*:

Player

- Ground and air movement
- Jumping (variable height, buffered input, coyote time)

- Wall grabbing/sliding/climbing/jumping
- Dashing (once per jump; resets when the player touches ground)
- Dash reset (power up to gain another dash without having to return to ground)

Gameplay

- Basic kill on touch hazards
- Delayed falling blocks after player touch.
- Falling icicles
- Patrol path enemies
- Spring launch pads
- Room unlock and level unlock system using collectible items
- Storyline. Cutscene system.

Main Twist:

- Inspired by newer *Ice Climbers* games where there are the two sisters, and inspired by *Celeste's* Chase of Badeline. We decided to make an enemy climber that the player must race to the finish in the final level. The Shadow Doppelganger follows the player's path with a delay of 1.5 seconds. If they catch up to the player or cross its path, the player is killed.

Feedback

- **Visual cues:** player animations give more feel and juice to running, jumping, landing, wall grab stamina depletion, and dashing.
- **Audio cues:** A distinct warning sound plays when icicles fall. The same applies to falling platforms. SFX for running, jumping, dashing, climbing, sliding down walls and death.
- **UI Elements:** Stamina timer for wall grab/climb time. Menus.

Player Controls

- **Arrow Keys / AD**: Move left and right
- **Spacebar**: Jump/wall jump (can be held for slightly higher jumps).
- **Shift**: Grab Wall
- **W/D + Shift**: Climb Wall
- **Click**: Dash in the movement direction
- **ESC**: Pause menu

Level & Progression
The game follows a progressively difficult ascent structure, with each level introducing new obstacles and challenges. ALL visuals are custom made by us. *Summit Rush* contains 4 handcrafted levels:

- **Level 1**– Base Mountain: Players start at the base of the mountain and learn movement mechanics
- **Level 2** – Mid Mountain: Enemy hazards are introduced and the player must use all movement mechanics to be able to complete the level. Environment mechanics introduced.

- **Level 3** – Sub Peak: new hazards and enemies introduced.
- **Level 4** – Summit: Get Away from the Shadow Doppelganger and beat to the finish line in order to beat the game. More environment mechanics/hazards introduced.

Scoring & Win/Loss Conditions

- Victory is achieved by reaching the summit after completing all 4 levels, and failure cannot occur. A player death will only reset you in the room you are in. The player will have to ascend through the levels and finally beat the shadow doppelganger.

Timeline & Milestones

Week 1: Core Mechanics & Gameplay Elements

- Project setup (Unity + GitHub repository)
- Implement core movement: moving, jumping, wall grab/jump, dashing
- hazard mechanics
- Create basic UI elements (health, Menus)
- Level Creation
- Camera follow
- Shadow doppelganger mechanics
- Conduct early playtests for movement feel and responsiveness

Week 2: Visual Polish & Finalization

- Finalize all levels
- Finalize and polish UI elements
- Implement environmental interactions (platform breaking, platform moving)
- Add visual enhancements : particle effects, animations, sound and other juice
- Conduct extensive playtesting and debugging
- Package the final build for submission

Asset Credits

Fonts

https://www.dafont.com/minecraftia.font

Sprites

All sprites & tile maps were hand-made using the Aseprite software: https://www.aseprite.org/

Sounds

https://artlist.io/sfx/track/logo-plus---synth-phrase-with-light-sweep/96388

https://artlist.io/royalty-free-music/song/lights/17220
https://artlist.io/sfx/track/whoosh-short-massive-synth-wind/23828
https://artlist.io/royalty-free-music/song/burkina-faso/61650
https://artlist.io/royalty-free-music/song/paradise-drive/51271
https://artlist.io/royalty-free-music/song/aaraam/132696
https://artlist.io/sfx/track/typing---laptop-keyboard-fast-typing/67744
https://artlist.io/sfx/track/cartoon-voice---talking-gibberish-fast-forward-/24962
https://artlist.io/royalty-free-music/song/korobeiniki---8-bit-version/120972
https://artlist.io/sfx/track/rubble---crushing-rotten-wood-cracking/76675
https://artlist.io/sfx/track/snowboard---riding-passing-by-turn-speed/35097
https://artlist.io/sfx/track/footsteps-in-snow-climbing-steps-hard/26365
https://artlist.io/sfx/track/basketball---made-shot-swish/42784
https://artlist.io/sfx/track/snow-dropping--light-icicle-falling/26369
https://artlist.io/sfx/track/hits-and-swooshes---deep-thud-cloth-character-movement-/104001
https://artlist.io/sfx/track/shoes-running-on-stone-floor/17782
https://artlist.io/sfx/track/hit-it---trampoline-heavy-bounce/59998
https://artlist.io/sfx/track/sci-craft-ui---pop-up-blip-cartoon-squeak-game/98023
https://artlist.io/sfx/track/strong-weather---heavy-gusts-of-wind-hitting-roof/108032
https://artlist.io/sfx/track/after-dark---souls-storm-dissonant/123176
https://artlist.io/sfx/track/natural-wind---winter-blizzard-howling/77697
https://artlist.io/sfx/track/sounds-of-iceland---peninsula-ocean-waves-wind-and-birds/120946

License in Repo.

Individual Feature Contribution

We both did quite a few features for this project so we have provided the minimum of two video snippets each of two of our features. For further breakdown of individual features you can reference the repo history or our Project Board: https://github.com/users/alrick19/projects/1/views/1?layout=table

Alrick
- Player Mechanics: https://www.youtube.com/watch?v=gkaG5EjWrrU
    - Commits:
        - [U] Changed player box collider height and width to match Sprite
        - [S] Changed Ground Detection method
        - Player Movement & Player Jump PR
        - [S] Added basic wall sliding & wall grabbing
        - [S] Moved Collision detection out of Player to clean up code
        - Unfinished wall jumping
        - minor fix for grabbing y momentum
        - Fixed downward jump while sliding/grabbing
        - Added vertical input & climbing
        - Added Dashing, not fully working.

- ■ [Fixed the Weird Dashing pattern](#)
- ■ [Added Player Idle & Running Animations/particles](#)
- ■ [Changed player animation speeds for smoother transitions](#)
- ■ [Fxied run particles rotation on Player sprite](#)
- ■ [Animations almost working, need to add better handling from grabbing to climbing](#)
- ■ [Added Dash Trail to make the dash "celeste-like"](#)
- ■ [CameraShake not working, fixed when not moving Dash](#)
- ■ [Added DashTrail prefab to scene (forgot to push)](#)
- ■ [Added Dash Particle on top of the Dash After Image](#)
- ■ [Implemented Terminal Velocity for falling](#)
- ■ [Added Jump Particle and fixed Dash Particle + player ledging](#)
- ■ [Fixed run particles & jump](#)
- ■ [DashReset in progress](#)
- ■ [Started making better animations for player, fixed one respawn point in room 5](#)
- ■ [Finished changing old animations to new ones](#)
- ■ [Fixed Dash Anim](#)
- ■ [Fixed player& doppelganger animation clips to be separate references.](#)
- ■ [Fixed ledging bug where you can ledge over spikes. Fixed level 2 end trigger position so player cant dash through dialogue](#)
- ■ [Made spike colliders a bit more forgiving to make levels less strict](#)
- ■ [Implemented limited climb time, & made level 2 easier](#)
- ■ [Implemented UI feedback for the climb time left](#)
- ■ [Fixed coyote time](#)
- ■ [small jump particle tweaks + level 1 camera fix](#)
- ■ [Added Slide Particle while sliding](#)
- ■ [Fixed dash reset right after dashing](#)
- ■ [Added Death particle effect on KillPlayer](#)
- ● Level Design (level 2 & 4): https://www.youtube.com/watch?v=p5fmVDzbXMw
  - ○ Commits:
    - ■ [Finished level. 2 room 1, added trampoline](#)
    - ■ [Room 2 almost done](#)
    - ■ [Added Icicle, hazard management for resetting on player death in progress](#)
    - ■ [Room 4 to 6 done in Level 2, 2 more rooms in progress](#)
    - ■ [Fxied Hazard Manager -> hazards & collectibles now reset on death, unless the room is cleared.](#)
    - ■ [Added Falling Blocks mechanic & finished final room of level 2.](#)
    - ■ [Added level 4 assets (expanded the current palette](#)
    - ■ [Made spike colliders a bit more forgiving to make levels less strict](#)
    - ■ [Started level 4](#)
    - ■ [Made first 4 rooms of level 4](#)
    - ■ [level 4 small fixes](#)
    - ■ [Finished room 5](#)
    - ■ [Added Lighting to collectibles and power ups](#)

Will

- Shadow Doppelganger: https://youtu.be/fUJvVcu6Aak
  - Commits:
    - https://github.com/alrick19/SummitRush/commit/8a9c43a5ae31758ade32b948dfaaff20a296dbb7
    - https://github.com/alrick19/SummitRush/commit/a79e3a90f7e9af066fada7d98d07487b695b36b7#diff-415e91a2982aeb5fd1c526900f4b1feec89ff6bd8db8b9e29649a57c7ec07d6e
    - https://github.com/alrick19/SummitRush/commit/7c67d2f5911f8df947b1fb2f82024eb10f280670#diff-8927737c29f4c639c12d46d09b66ff0cb74aa2568e8dc5d5b6a6fd97711ceb75
    - https://github.com/alrick19/SummitRush/commit/1dae5e61ffe84a2adc5b47b3e37a6ffc4f647ca0#diff-03038ac6c95e9139ed78c34354135e588d5d7b92d9697578e470561d4d2b563b
    - https://github.com/alrick19/SummitRush/commit/72e42c40aa3a264b589d81f29351b9d224e5564b
    - https://github.com/alrick19/SummitRush/commit/031c5460ce3ba05b9553ba565c7766cc587d259b
    -
- Audio Management with in game Settings Menu UI: https://youtu.be/MjTiMwVuhLs
  - Commits:
    - https://github.com/alrick19/SummitRush/commit/18379bf4c4540f279cb3ceef43887cd3e76c7af4
    - https://github.com/alrick19/SummitRush/commit/e78054f66eb6d61ebd203c213215a2c32b8a6934
    - https://github.com/alrick19/SummitRush/commit/8a391da963101c2d92eeea486fbb8ea29f8040a0
    - https://github.com/alrick19/SummitRush/commit/755bdfc67369bbc7e94245f5e261a91ee7aa06e2
    - https://github.com/alrick19/SummitRush/commit/34cbd71860e4f8f9813a93f16066acccdcd5b7f0
    - https://github.com/alrick19/SummitRush/commit/adb555e8d05d0b98a6c778797d526d47cd4b5fb2
    - https://github.com/alrick19/SummitRush/commit/7d4c57bd81558304e1305637a53002a5c9f2406b
    - https://github.com/alrick19/SummitRush/commit/5eb9b88242cf395197b9a57b5a698e4476d15608
    - https://github.com/alrick19/SummitRush/commit/7162df596130cc933a12703bc22160a6f7d86ded
    - https://github.com/alrick19/SummitRush/commit/3edcb3b0fb2d32d2a6e8bd0a74e2c91034f1f1e3
    -