Game Description

1DV437 Introduction to Game Programming

Samuel Gunnarsson

Email: sg223bv@student.lnu.se

Parkour style delivery service

Parkour style delivery service is a game that takes you to new heights. You are playing as a parkour guy on the fastest delivery service in town. Each level is called a "run" where you need to get to a certain point and pick up packages along the way. You can feel the excitement of jumping around on high buildings and between rooftops as well as the danger of slipping and falling. There will be obstacles in the world that deals damage and tricky jumps that needs to be performed to avoid gaps.

Game Objective

The main objective is to pick up one or more packages during the run and deliver at the end of the level. The game calculates your score for each level which is determined by a combination of packages you picked up and the time for the run. Use the different techniques such as wall jumping, sliding and crouching to get through the run as fast as possible. It should take at least 4 minutes to clear the game.

Feature List

Player

- The player can move left and right and perform a jump and crouching.
  - These basic controls use the W, A, S, D keys or the left, right, down and up arrows
  - Additionally, the SPACE bar can be used for jumping.
- The player can do a wall jump when jumping against a wall while moving against it and hitting jump a second time.
  - If no jump is directly pressed the player slides for a bit and another jump is possible during the slide.
- Dash: When holding "J" the player can dash and runs faster. (Running animation plays faster)
- The player can move left and right while crouching.
  - If crouching is done in midair the character should raise its legs to cower
  - The player does a slide if crouching is pressed while running and can get under low obstacles this way.
- The Character should do a roll after landing from a higher fall.
- A sound effect should be played when the character dies
- Different animations will be shown when moving, jumping, crouching.

Camera

- The camera follows the player horizontally and vertically on the 2D screen.
  - The vertical movement is only triggered when you get past a certain high or low threshold and should be smoother than the horizontal movement.

Game controller

- When the game starts a countdown 3, 2, 1, GO is played.
- When the game ends you can choose to continue or retry if the level was finished otherwise it just gives the option to retry.
- The game counts a score for the player which is dependent on time and collected items. It is calculated at the end of the level
- Number of collected packages and the total number of packages for the level is shown at the top middle of the screen.
- The game tracks the time for each level but does not have a time limit. A faster time gives a higher score. The Time is shown at the top right of the screen
- The player has a set amount of lives before the game resets from the beginning of the level and restarts the run. Number of lives is shown at the top left of the screen.
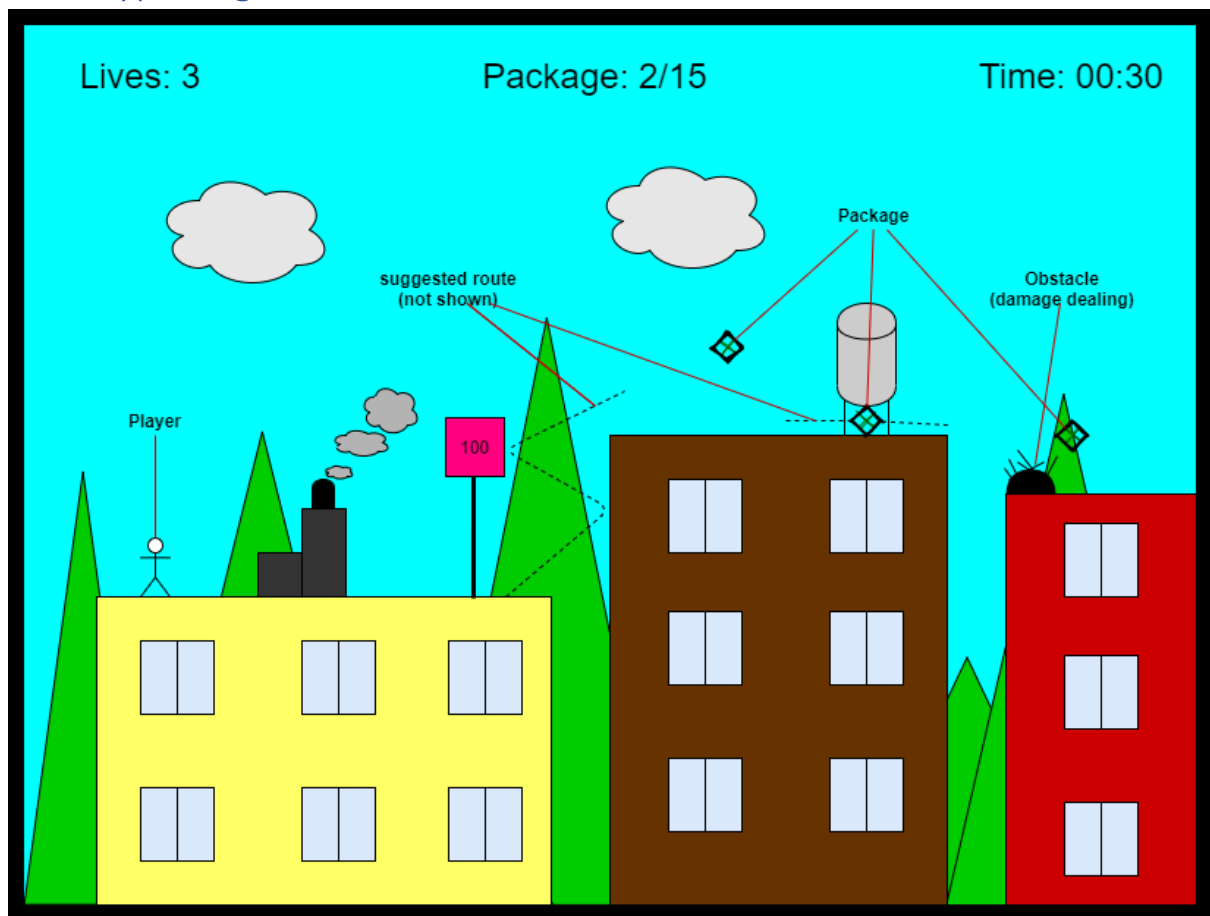
Game world

- The game is built up by different platforms and buildings that the player can stand and jump on.
- The game world has objects that deals damage that must be avoided by the player.
- The game has some more traps in the higher levels that moves and becomes harder to avoid
- The game has flying enemy birds that deals damage and must be avoided by the player
- Number of traps and birds will increase after each level and traps will also be harder to avoid
- A background is shown when playing the game.

Options and menus

- When the game loads you will be taken to a main menu which has the following options
    - Start: takes the player to the level select
    - High score: shows the player high score
    - Sound: shows sound options
        - Sound Fx and music volume can be adjusted
        - Sound Fx and music can be muted or unmuted
    - Quit: Exits the game
- During the game you can pause the game and choose the sound options or quit the game

Prototype of game view

Lives: 3   Package: 2/15   Time: 00:30

Package

Obstacle
(damage dealing)

suggested route
(not shown)

Player

100

Assets

I will use the following assets from unity assets store.

- Level Background
  https://assetstore.unity.com/packages/2d/textures-materials/sky/fantasy-skybox-free-18353
- Character with sprites
  https://assetstore.unity.com/packages/2d/characters/2d-demo-character-sprite-sheet-137085
- Futuristic level
  https://assetstore.unity.com/packages/3d/environments/urban/white-city-76766
- City level
  https://assetstore.unity.com/packages/3d/environments/urban/simple-city-pack-plain-100348
- Collectable items
  https://assetstore.unity.com/packages/2d/gui/icons/100-alchemy-item-icons-free-72605
- Damage dealing traps
  https://assetstore.unity.com/packages/2d/environments/2d-death-traps-free-20706
  https://assetstore.unity.com/packages/2d/environments/2d-death-traps-ice-free-24714
- Enemy Birds

  https://assetstore.unity.com/packages/essentials/asset-packs/2d-sprites-pack-73728

- Music
  https://assetstore.unity.com/packages/audio/music/rock/epic-rock-track-60043
- FX
  https://assetstore.unity.com/packages/audio/sound-fx/voices/attack-jump-hit-damage-human-sounds-32785