Concept

Platforms: PC (Windows 10)

Technologies: Unreal Engine 4

Languages: English

Audience: Anybody who wants to kill his/her time in a challenging joyful game

Genre: Runner, Platformer

Mood: A player feels joy and satisfaction from improving his skills in the game when he stays alive longer and makes better results

Emotions: Accomplishment, Challenge, Interest

Rating: Everyone 6+

User Number: Single player

Gameplay time: Unlimited

Main mechanic: Running (with increasing velocity), Jumping, Rolling

Setting: 3D modern minimalistic endless runner

Goal: Survive as long as you can constantly improving your result (distance covered and coins collected)

Targeted audience

Primarily, game is made for anybody who wants to kill his/her time. Secondly, there is a challenge as players can compete trying to beat each other.

Game Character

Game mechanics and operating

Actor moving:
A / Left Arrow – move to the left line
D / Right Arrow – move to the right line
Space / W / Arrow Up – jump
Left Shift / S / Arrow Down – roll
Shift + Space [main screen] – to start the game
R [game over screen] – to restart the game
Esc (during run) – to pause / unpause
Esc [main and game over screens] – to exit the game

Specific action

Interface

Main screen

Initial screen with game title and controls description. Opened right after the game was launched or after restart.

Main screen (run screen)

Coins collected shows how many coins the player has picked since the game (current run) began.

Current score – how much distance player has traveled in the current run (calculated as tiles passed multiplied by a coefficient).
Shield status – this progress bar shows how much longer the shield boost will be active.
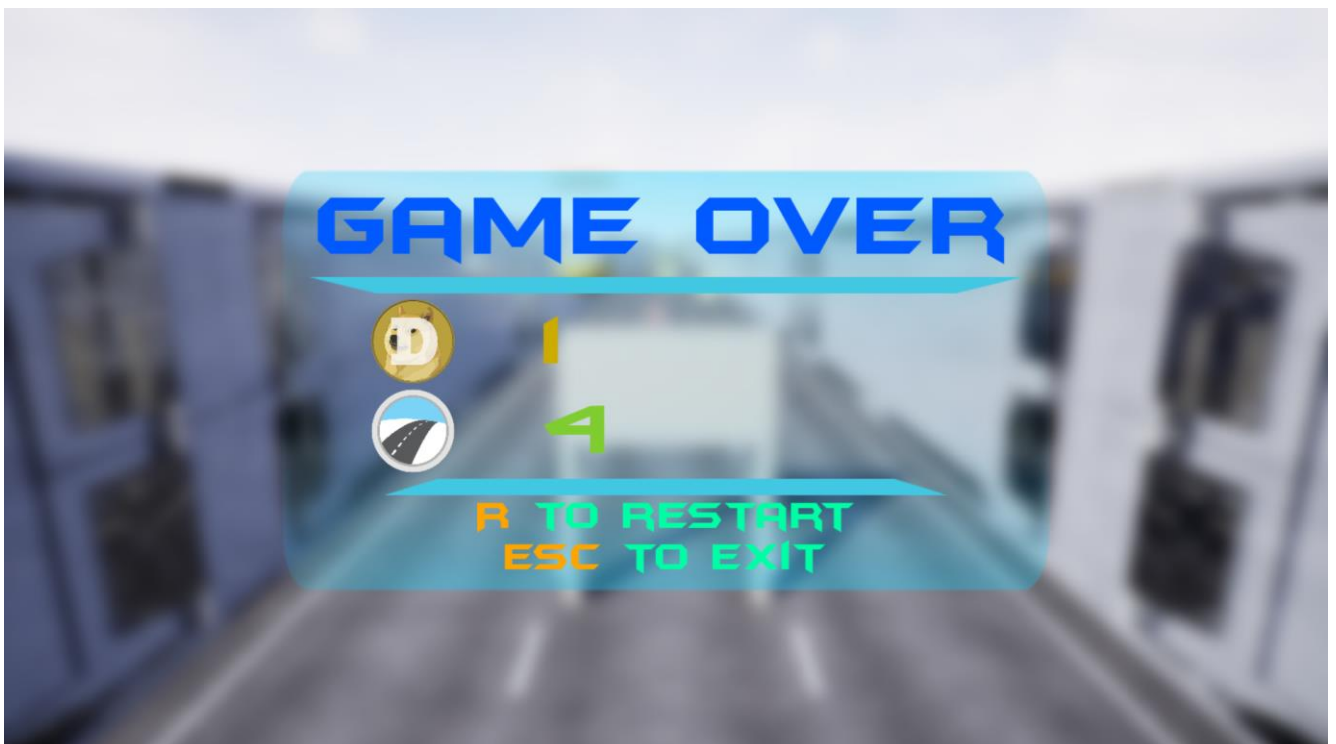**Slowmo status** – this progress bar shows how much longer the slowmo boost will be active.
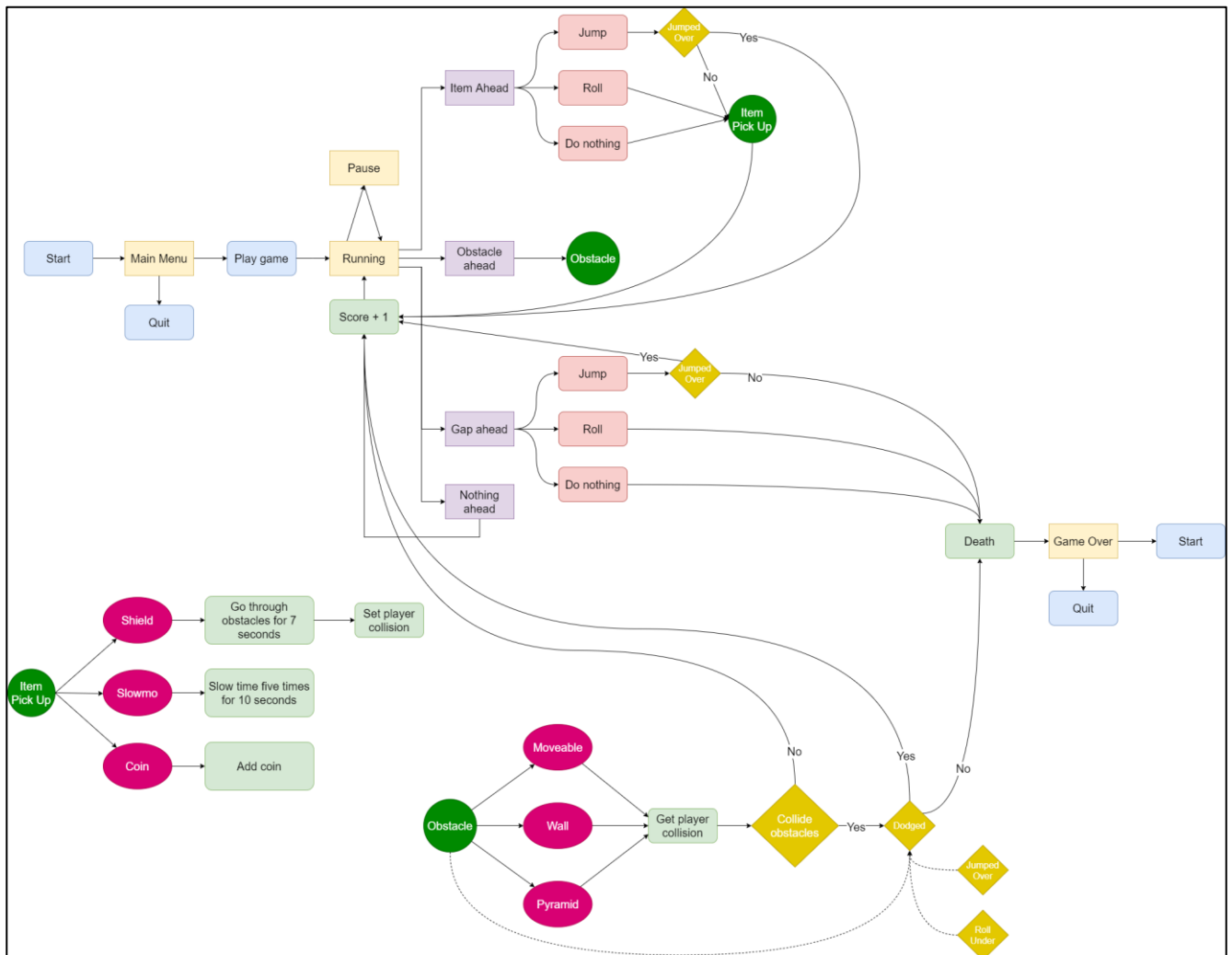
Pause screen

Opened when Esc was pressed during run. Can be closed with clicking Esc again.

Game Over screen

Displayed when the player has died (bumped into an obstacle or fell of the track).
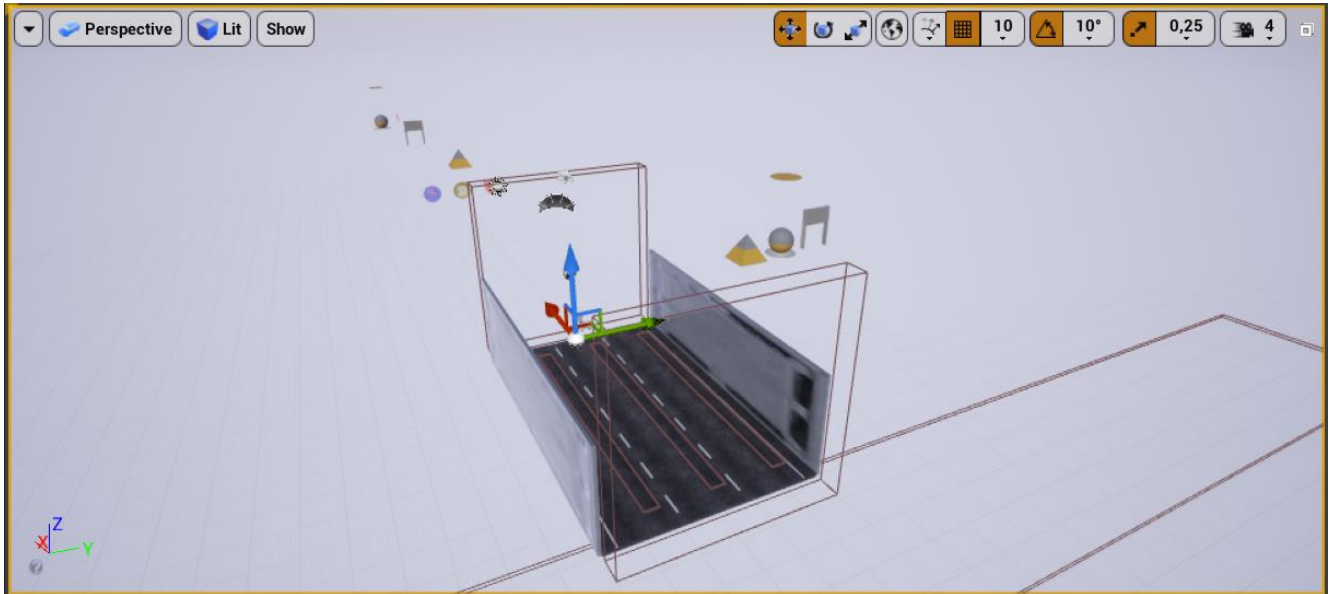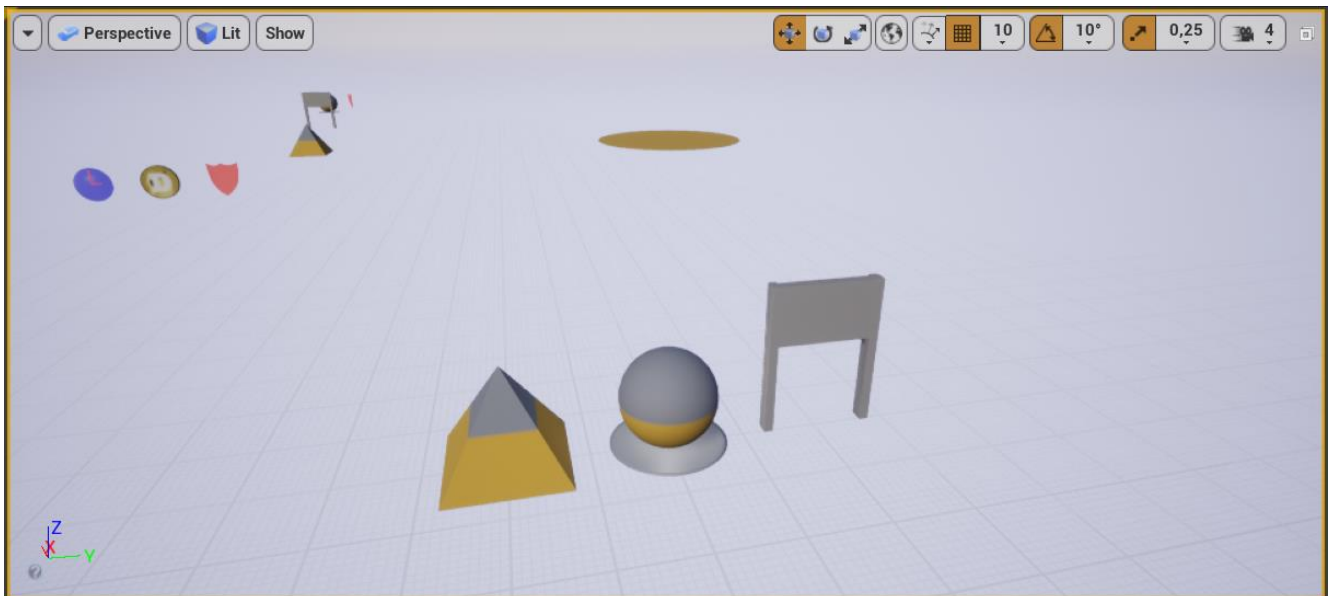
Gameplay map

Attached separately.

Visual

From a visual point of view, the game has a modern minimalistic design. Main character, tiles, obstacles and items follow same style (one color or 2 contrasting colors). Screens utilize more colors to highlight important features.
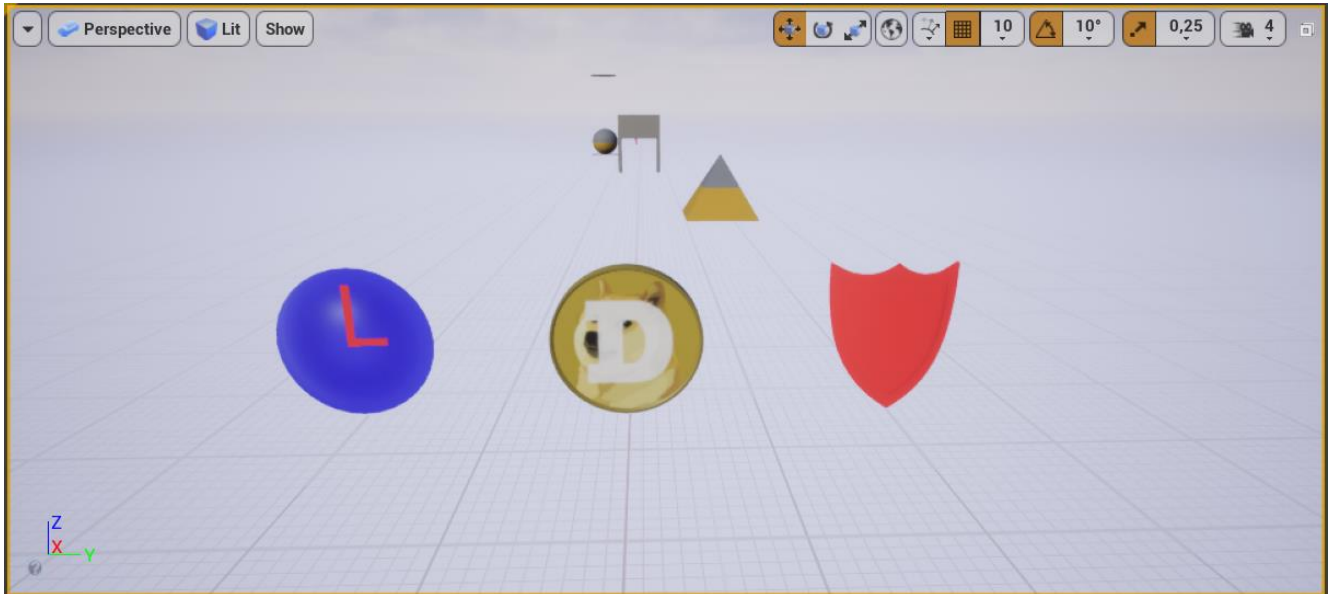
A tile

Obstacles

Items

Level Design

The game features a procedural world generation.

Initially, a save path of 5 tiles without obstacles (and items) are spawned to prevent the player from dying right when he starts the game. Afterward there are 10 tiles spawned ahead of player. Tiles what were already passed by the player are deleted in 2 seconds.

Each tile has 3 lines. A tile is spawned with a random number of gaps (about spawn chance read below in balance section). A tile has a random number of obstacles on it (one for each nonempty [without gap] line), so obstacles can be spawned only in a single location on each line. If a tile to be spawned is not save (has obstacles or gaps), it will have a save tile before and after itself (it makes game playable when character movement speed is nearly maximal). A tile has a random [from 0 to 5] number of items on it.

Balance

Player speed is increased from 1500 to 3000 gradually as player gets a determined number of scores. If a player falls of the tile, he dies same as when he hits an obstacle (without shield boost). Shield boost protects player from hitting obstacles (for 7 seconds), slowmo boost slows time 5 times [except for the player] (for 10 seconds). Both boosts are rechargeable (if a player takes a new one, while the previous is active, boost expiration time will be renewed).

Generator (randomizer)

Spawn chances depend on a current difficulty which is increased as player passes the level. There are three levels: easy, medium and high.

Easy [starts from the 6th tile]

Object	Chance (% out of 100)
Tile with a gap	20
Tile with an obstacle	20

Save tile	60
3 gaps	10
2 gaps	30
1 gap	60
Obstacle moveable	20
Wall (upper)	30
Pyramid	50
Shield	3
Clock	3
Coin	94

Medium [starts from the 301st tile]

Object	Chance (% out of 100)
Tile with a gap	30
Tile with an obstacle	30
Save tile	40
3 gaps	20
2 gaps	30
1 gap	50
Obstacle moveable	30
Wall (upper)	30
Pyramid	40
Shield	4
Clock	4
Coin	92

Hard [starts from the 1001st tile]

Object	Chance (% out of 100)
Tile with a gap	40
Tile with an obstacle	40
Save tile	60
3 gaps	33
2 gaps	33
1 gap	34
Obstacle moveable	33
Wall (upper)	33
Pyramid	34
Shield	6
Clock	6
Coin	88

Artificial Intelligence

None

History

None