Core Project Document

Group Information

Name: TedDyfense
Group Number: 3
Group Members: Abdullah Tezcan
Esmeralda Tomasöa
Pieter Kools
Damien Crielaard
Arjan van Ramshorst
Jeroen Methorst

Theme and interpretation

We are mainly building on the theme "Build the level you play". We interpreted this theme in our game by allowing the player to place and destroy blocks in a pre-built environment, allowing the player to play strategically by building his own defenses.

Other themes which apply to our game are "Things you hate" which we interpreted in our game as nightmares, and "You only get one" as in you only get one teddy bear to defend the house.

Description of the game idea

The story of our game is about a sleeping child and a nightmare. In his dreams the child is attacked by various nightmares, with his loyal teddy bear rising up to protect him from his nightmares and allowing the child to continue his sleep undisturbed.

To accomplish this goal, the teddy bear has a variety of weapons in its arsenal, and a collection of blocks allowing it to build a defense against the hordes of enemies. The game ends when either the teddy bear dies or when the child wakes.

Key components

- Computer Graphics
  - 3D models
    - 3D animated models of the teddy (player model) ★★
      - Assigned to: Esmeralda
      - The model and animations are created using Blender.
    - 3D models of the house including furniture (game environment)★★
      - Assigned to: Abdullah
      - The house and furniture are made using SketchUp.
    - 3D models of the nightmares (enemies) ★★
      - Esmeralda
      - The model and animations are created using Blender.
    - 3D model of the placeable blocks ★
      - Assigned to: Jeroen
      - These blocks can be placed by the player to create obstacles against the enemies.
  - Textures
    - Creation of textures for the house and furniture ★
      - Assigned to: Abdullah
    - Creation of the textures for the player and enemy models ★
      - Assigned to: Jeroen
    - Creation of the textures for the placeable blocks★
      - Assigned to: Jeroen
  - Special effects
    - Sound effects ★
      - Assigned to: Arjan
      - Sounds are created for: Shooting, placing blocks, collecting items and more.
    - Explosion effects ★
      - Assigned to: Jeroen
    - Game slows down when the teddy bear dies (dramatic effect) ★★
      - Assigned to: Damien
  - Rendering
    - Creation and placing of lighting in the environment ★
      - Assigned to: Arjan
    - Creation of our own "Toon Shader" ★★
      - Assigned to: Arjan

    - User Interface
        - Start, pause, main, and game-over screen ★
            - Assigned to: Arjan
        - Optional: Shop for buying new weapons/blocks/items★★
            - Assigned to: Arjan
            - The player can use accumulated resources to buy weapons/blocks/items in some kind of in-game shop.
        - Intro to the game telling the player the story ★★
            - Creation of a storyboard for a small animation.
- Artificial Intelligence
    - Enemies can find the fastest way to both the sleeping child (flag) and the teddy bear (player) ★★
        - Assigned to: Pieter
    - Nightmares can break blocks to get to their target ★★
        - Assigned to: Pieter
        - Enemies decide whether to break blocks or walk around them to get to their targets
    - Nightmares adapt to the player changing the environment ★★
        - Assigned to: Pieter
    - Different types of nightmares with different abilities and properties ★★
        - Assigned to: Jeroen
        - Enemies get different amounts of health points, do different amounts of damage, and have additional abilities.
    - Adding konami code making enemies almost invincible (reverse effect) ★★
        - Assigned to: Damien
        - Konami code results in enemies able to get to their goal using the fastest path while making them invincible to any attacks except those coming from behind the enemy.
- Web & Database
    - Recording of the scores and high scores ★★
        - Assigned to: Pieter
        - Different scores and statistics are saved like kill streaks, blocks places, survival time and more.
    - Scores and statistics are saved on a web server ★★
        - Assigned to: Pieter
    - Visualization of scores and statistics ★★
        - Assigned to: Pieter
        - Visualization in some kind of highscore/statistics menu.
    - Player can create their own avatar for the highscore screen ★★★
        - Assigned to: Pieter/Abdullah
        - Creating avatars in the shape of a teddy bear, which the player can edit by adding accessories.

- Programming
    - The amount of enemies depends on how fast the player is playing the game ★★
        - Should the player be faster than a certain set time, more enemies are spawned into the game.
    - Different types of weapons and blocks ★★
        - Assigned to: Jeroen/Damien
        - Different weapons with their own properties (AK, shotgun, handgun, RPG, flamethrower)
    - Slowing the game ★
        - Assigned to: Arjan
        - Adding motion blur and slowing the camera for dramatic effect.
    - Stopping the enemies from walking through walls and objects ★
    - Teddy bear can place blocks ★★
        - Assigned to: Pieter
    - Pre-built levels and level editor ★★★
        - Assigned to: Pieter
        - Levels are written to binary files. A level editor allows for editing these files allowing the player to create their own pre-built environment.

Student names, e-mail addresses and role assignments

Producer:

Abdullah Tezcan a.tezcan88@gmail.com

Game Designers:

Damien Crielaard damiencrielaard@gmail.com

Jeroen Methorst Jeroen.methorst@gmail.com

Lead Programmer:

Pieter Kools pieko@ziggo.nl

Lead Artists:

Esmeralda Tomasöa esmeraldatomasoa@gmail.com

World Builder:

Arjan van Ramshorst abvanramshorst@gmail.com

Schedule

Week 1 (10 Nov – 16 Nov)	**Brainstorm, Prototype** - Report - Level Building - Enemy/Player attributes - Flag defense - Gameplay *12 Nov* **Deliverable: Core Project Document**
Week 2 (17 Nov – 23 Nov)	**Prototype, Testing** - World block placement - Player can fire weapons - Player and enemy art
Week 3 (24 Nov – 30 Nov)	**Prototype, Testing** - Start building the actual game - AI implementation *26 Nov* **Deliverables: Prototypes, Prototyping Report, Revised Core Project Document** *27 Nov* **Deliverables: Game Design Document**

Week 4 (01 Dec – 07 Dec)	**Building** - AI implementation - User Interface - Different types of blocks and weapons - Item pickups - Art style
Week 5 (08 Dec – 14 Dec)	- Healthbar - Different types of stairs - Art style **Deliverables: peer reviews**
Week 6 (15 Dec – 21 Dec)	- Different levels/maps - Art style - Minimap / Compass **Deliverables: early access game**
Week 7 (05 Jan – 11 Jan)	- Shop - Multiplayer - Konami code
Week 8 (12 Jan – 18 Jan)	- Debugging and game tweaking **Deliverables: beta game**
Week 9 (19 Jan – 25 Jan)	- Finalize debugging and game tweaking **Deliverables: peer reviews and indie game**

Link to the GitHub project

https://github.com/Pieter12345/Minor-Software-Ontwerpen-project.git