

Ubisoft Next 2023 Programming Challenge Document

Note: all modified and newly created files are under the filter "Challenge Entry"

Game Information

Summary: 2D game using sprite, object-oriented programming and object pooling

Overview: Bomberman inspired 2D (potentially RPG) game with level teleportations, pickup treasures and enemies.

Characters (changeable):

- Bomberman
- Blue Ghost
- Red Ghost

Pick up items:

- Blue Key: turns the player into the blue ghost
- Cherry: extra life
- Apple: turns the player into the red ghost
- Pear: turns the player into the default Bomberman
- Strawberries: reduces the time elapsed by 10 seconds
- Loot Crates: gives player xp

Enemies:

- Green
- Blue
- Purple
- Orange
- Pac

Controls and Mechanics:

- W, A, S, D - Player Movements
- Space - Start Game/Place Bomb
- Left Shift - Pause/Unpause (from in-game) or Back To Main Menu (from end scene)
- Right Shift - Show Debug Colliders
- Esc - Exit

UI:

- Level: the player's level
- HP: player's number of lives
- Bomb Count: number of bombs that the player can still drop
- Enemy Kill Count: number of enemies killed

- XP: experience
- Time: the duration elapsed of the current round of game

Design:

- Tile based level
- WallBlocks: Blocks that can be used to form borders, pillars. Can be destructible or indestructible
- Enemy AI: simple patrol AI behaviour with options to add additional (such as chase player, drop bombs, spawn more enemies, etc)
- Collisions: AABB and radius checks.
- Animations and respective states
- Scenes: Menus (Start, Pause, End), Maps (game levels)