

CIS 29 - Group Project
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Project Requirements

Game Requirements

- 1) Makes use of **SFML libraries**.
- 2) Includes **keyboard input** for player movement, dropping bombs, and pausing. (main.cpp: line 221-231, player.cpp: lines 54-78)
- 3) Includes **mouse input** for using the game menu. (main.cpp: lines 152-173)
- 4) Includes **sound** for background music and sound effects. (main.cpp: 116-132, 141, 206, 342, Bomb.cpp: lines 35, 43)
- 5) **Artwork** is included in the form of sprites, bombs, and map tiles.
- 6) **Randomness** is incorporated into the enemy characters as random movements and regeneration in random locations. (main.cpp: lines 54-55, Enemy.cpp: lines 19, 36, 88, 93)
- 7) There are multiple **backdoors**. There are backdoors to end the game, add points, reset points, end time, and reset time. (main.cpp: line 232, score.cpp: lines 122-129, timer.cpp: lines 42-49)
- 8) There is **help and introduction** to the rules in the game menu.
- 9) Other than the SFML library, there is **no 3rd party code**.

Program Requirements

- 1) This is a **multiple file** program. There are 25 .cpp and .h files combined.
- 2) This is a **multiple class** program. There are 12 classes.
- 3) The program is built using a **library** that contains all the classes.
- 4) This program utilizes **inheritance and polymorphism**. The Enemy and Player classes are derived from the Character class. These classes are used polymorphically in main. (main.cpp: lines 186-192, 262, 274, 296-315)
- 5) A **namespace** is used to define a number of initial values. (main.cpp: lines 30-59)
- 6) **Exception handling** is utilized when opening and saving the scoreboard file. (main.cpp: 438-441 and anywhere a file is opened)
- 7) There is an **overloaded insertion operator** used to output the scoreboard. (score.cpp: lines 140-150)
- 8) Two **STL containers** are used: vector and list. (main.cpp: line 185, Fireball.h: line 33, TileMap.h: line 39, score.h: line 27)
- 9) **6 C++11 features** are included:
 - nullptr (main.cpp: lines 276, 431)
 - range-for-loop (main.cpp: lines 259, 297, 329, 391)
 - bracket initialization (main.cpp: lines 83, 92, 185, 349, 350)
 - default (used for constructors or destructors in most classes)
 - override (Player.h: lines 36-41, Enemy.h: lines 29-31)
 - auto (main.cpp: lines 259, 297, 329, 391)
- 10) **Style Guidelines** defined in another document.