

Programming Test – Bomberman (Unreal)

Steps

1. Create a public Git repository on Bitbucket, GitHub, or any other Server
2. Push a first commit including only the README.md and .gitignore file
3. Follow the tasks and commit in meaningful steps, so we can follow your changes
4. Document as much as possible using commit comments, code comments, and writing on the README.md file
5. At the end, take some time to explain your next steps if you would continue working on the project

Task

Though there is no fixed time limit, it would be nice to receive your result within one week. You should not spend less than 5 hours on the test but also no more than 10 hours. You do not need to finish the test.

Your goal is to create a multiplayer “programmer-art” version of the old Dyna Blaster/Bomberman game in 3D.

You can develop the game in incremental versions and tag these as releases in the Git repository:

1. Single player version with bombs, destructible walls, and pickups
2. Multiplayer version over local network or Internet
3. Enemy AI that controls other characters until actual players join

Features

- Static top-down view on the level **or** camera that pans in/out depending on distance between players in the level
- One pre-defined map **or** procedural generated maps
- Implementation of different pickups
 - Longer bomb blasts
 - More bombs
 - Faster run speed
- Bomb placing by the player
 - Player is starting with only one bomb that can be active at a time
 - Placing a bomb subtracts one from the count, when the bomb explodes the count goes up again
 - Amount is upgradable with pickups
- Player death when standing in bomb blast
- Bomb blasts
 - Should not be spherical but linear in the four main directions
 - Can penetrate players/pickups when going off (killing/destroying them)
 - Are stopped by walls

- Trigger other bombs
- Differentiation between destructible and indestructible walls, destructible walls can spawn random pickups (~30% chance to spawn something) upon destruction
- Win conditions:
 - Show win screen when only one player is alive
 - Show a map timer, that counts down and ends the round
 - Show draw when the last players die in the same bomb blast (or chained bombs) or multiple players are alive when the timer runs out
 - After round end, freeze game in its current state
- Reset option on end screen
 - Starts another round
- Multiplayer over local network or internet (4 Player)
 - Make the characters distinguishable (color, nameplate, ...)
 - Create a simple system to start and join a game
- AI enemies that behave like a player (as long as no player has joined)