**Bush\_Sniper\_V1.0**

16. Aug: 00:00-3:00

* created new project
  + Changed Physics2D.gravity to (0,0) in Project Settings
  + Added Environment(Plane as a Ground, Cubes as Obstacles) to Scene
  + Added Player
  + Added Dummy- Sprites and Materials to the Assets
  + Added two new Scripts to Player-root-object:
    - PlayerController: handles all of the input and stuff like are we jumping? what way should we be looking?
    - PlayerMotor: has a set of funcitons to move the player, make him jump, fly shoot, etc. kind of like an ability-script
  + As new rule for my programming-style: Variables created withing methods(includes parameters) are prefixed with a underscore. f.e. : Object \_something
  + Added player-movement and rotation to PlayerController.cs and PlayerMotor.cs
  + For player movement, never use .getKey(A/W/S/D) again. We can get the userinput with Input.getAxisRaw(„Horizontal “) and „Vertical“, then we can calculat the velocity from these two floats and multiply it with the speed of the player. Also use a rigidbody and rb.MovePosition(...) and rb.MoveRotation(...) and velocity for smooth movement.
  + If you can’t add a Script, make sure the ClassName and ScriptName are the same.
  + Added FollowCamera, which is responsible for synchronizing the players and cameras x and y position
  + WIP: add gun rotation and fix movement bug

16. Aug: 12:25-12:45

* finished gun rotation, had to calculate an angle with Atan :)
* changed Movement from playerAxis-driven to AWSD
* Code cleanup
* Testing: Movement and rotations are very very smooth, even if we don’t build the game.

18. Aug: 23:00 - 01:10

- Added NetworkManagager and SpawnPoints for Multiplayer

- Fixed Camera Bug: With the NetworkManager we don’t have a player when you start the game, but the Camera needed a PlayerObject. To solve the bug i give the camera it’s playerObject with a setter, when the playerObject gets created.

- Also i added the camera to the Player now, and remove it’s parent.transform, so we don’t move the camera while moving the playerObject.

- fixed some more and some more bugs about the followCamera and player in Multiplayer behaviour - YEAH, its working :)

19. Aug: 4:30-5:15

- fixed camera bug: camera was following with lag. Had to call Update() instead of FixedUpdate for moving the camera.

- fixed movement bug: movement works now in multiplayer

19. Aug: 23:00-01:15

* Added PlayerShoot Script which does a RayCast in the direction the player is aiming and then tells if we hit a RemotePlayer(every player which is not our clients)
* Added updating of gunBarrel rotation for multiplayer
* The Server gets now informed about Player Kills
* Added Damage to Multiplayer: Player and GameManager Scripts

20. Aug: 23:50-2:40

- Added Respawning to Multiplayer

- Bugfixing TakeDamage.

- Shooting refactoring

- Bullet Trail

The NetworkTransform interpolation is not working properly anymore with the Bullet Trail, but it looks fancy :P

21. Aug: 23:00-23:50

- Added Muzzle Flash

23:50- 02:30

* WIP: Map-Generation

25. Aug: 01:00-02:00

- finished random Map-Generation

2:30-20:35

* added spawn points

Todo: Refactor Map Spawning from Player to GameManager or something

Todo: implement Bush Spawner

Todo: write advanced networkTransform

Todo: implement HealthBar HUD

Todo: implement Hitmarker with sound

Todo: implement Enemy Health Bar

Todo: implement Shotgun, Rifle, Missile Launcher

Todo: implement random weapon spawns on map

Todo: implement matchmaking and rounds

Todo: implement bush with nice simple design

- TODO: deactivate velocity force on collision!!

* Videos to watch and use:
* #1 Player: outline a 2D image with fire particles: https://www.youtube.com/watch?v=9ikUGJSuKQE
* many different sprite fx preview: https://www.youtube.com/watch?v=L-fvOerlNFY
* Trail effects, we can use this for the player and f.e. projectiles: https://www.youtube.com/watch?v=\_TcEfIXpmRI&t=572s
* TOP 2D assets: https://www.youtube.com/watch?v=InGc1XVE-j8
* homing missile: https://www.youtube.com/watch?v=0v\_H3oOR0aU
* particle system trails: https://www.youtube.com/watch?v=agr-QEsYwD0
* 2D lightning 2: https://www.youtube.com/watch?v=fwyAoE\_uMFo&t=6s
* 2D lightning 1: https://www.youtube.com/watch?v=GLS5\_V7kN-8