CATEGORIES:

PLAYER CONTROLLER

- Added IK foot placement system, so the legs of the player are adjusted to any kind of surface below it, including slopes, terrains and any kind of obstacles in the floor. This system also works in any kind of surfaces when the gravity system is being used and can be applied to humanoid AI as well
- The top down movement is now smoother just by tweaking a bit the animator tree used for this type of locked view which is the same used for similar views, like isometric
- Player can now jump while carrying and firing weapons in free firing mode when he can move freely and fire without aiming and without using strafe movements
- Player can now jump while in aim mode too for both weapons and powers, aim in the air and even if the player falls from the ground, he won't stop the aim mode if he was on that state like previously was made. This allows quicker movements and transitions between states, so you can aim or just fire while keep moving or even jump while firing.
- Added comprobations to prevent the player from using powers or weapons while in crouch mode, avoiding he gets up while in zones where the player can get up while crouching, due to the low height of that zone. This will change in 3.0, allowing the player to use weapons and powers on crouch state, adding the necessary strafe animations to use this state properly
- Option to detect rotating or moving platforms and objects where the player can still and displace with them, for things like a platform which is rotating
- Added separated options to configure if the player can move while aiming a weapon or power on locked camera and in free camera for first and third person separately
- Player won’t keep his current weapon in case it is being carried when enter of exit from a gravity zone, so he can keep carrying or aiming a weapon or power even when changes from a gravity direction to other or zero gravity to regular gravity
- Added clamp value for the hips used in the IK foot system, to avoid the player to lower the hips too much when moving on slopes and inclined surfaces
- The upper body rotation is now smoother, moving the code which manages the rotation amount to fixed update, so when the player is aiming in third person, the upper body rotates toward the camera direction much smoother and with a better responsiveness
- Improved animator, removed a couple of layers which can be placed inside the main one with less elements needed, improved movement transitions when player looks and rotates automatically toward the camera and a few minor things
- Configured running strafe animations. The new changes in the animator makes easier to add this animations and new ones for new actions, only need that the person who made the animations apply a couple of settings to being able to use it with root motion, so that should be ready
- Added clamps values to the upper body rotation system, with minimum and maximum values for how much the chest and spine are rotated toward camera direction in aiming mode

- This could look not too much useful, bu in 3.0, not only the spine will rotate, but the arms will also rotate toward the camera direction, looking like the player is actually moving his arms to aim up and down, with a more organic behavior, so the rotation in the upper body will be more limited combined with arm rotation
- Between the improvements of the animator, the player already checks if he in aiming mode or not and applies a different strafe tree, in this case, the left direction changes, making him to move to left, but the legs face to right, to avoid awkward rotation of the body
- Added default values for walk and run when player looks in camera direction, like strafing movement by default or when aiming weapons/powers. This allows to configure if the player walks or runs by default on that mode and the value applied when run button is pressed, so the player can run by default in strafe state and run button will make player to walk and vice versa
- added an option on weapons to disable the IK on player's arms once he draws a weapon and the weapon itself is placed inside the hand used to draw the weapon
- Like that, instead of have a fixed position to carry, the player arms can move freely while he is not aiming or firing. On that case, the IK is activated again and weapon is placed in the aim position. Also, it is made smoothly to avoid any awkward movement
- Improved the draw weapon action on third person, making a smoother movement and there will be more improvements for this IK system on 3.0 This option also works if the quick draw weapon action is active
- Improved player states manager component, all the external dependencies with not general components have been placed in other new scripts (in this case, the ability to convert into a sphere, similar to metroid games). And the rest of other function calls have been transformed into a list of player mode elements, where states such as weapons, combat, powers, etc… are not totally independent from this component and can be configured to be enabled and disabled using events
- Improved upper body rotation and look direction when the player is in aim mode, for powers or weapons, making him to look in camera direction in a better way, disabling also the spine animation in the avatar used on strafe mode
- Added option in player controller to configure the regular speed animation, by default the speed is 1
- Added option to deactivate root motion on the player in third person, allowing to configure different speed vales for walk, crouch, run, strafe, sprint, etc.. This also allows a more precise control in places like top down and similar locked camera views
- The use active of root motion can be toggled in inspector and called through events, so it can be enabled/disabled at any moment. I will record a few clips tomorrow so you can see the difference on both modes
- Added option on weapons and powers to activate the run mode when player enters in aim mode, so instead of being in the walk strafe, the run strafe is activated by default, and disable the run state when he stop aim the weapon is the player wasn’t running before enters the aim mode

- Added option on player input manager to activate a manual control of the movement and camera directly in the editor, with for float fields using a range type, for vertical and horizontal value for both input. This can be used to test the movement of the actual player without using external input (keyboard and mouse/gamepad), make another player to move, use it a a debug, etc…
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PLAYER CAMERA

- Added separated fields for rotation speed value for third and first person. This value is used as a multiplier for the input received for mouse or gamepad joystick, allowing to apply a higher or value rotation according to the input movement amount
- Added option to reset camera rotation toward player direction if the camera is not rotated during x amount of time, also, the rotation can be triggered by an action, using - key. This works in any gravity direction too and the amount of time and the speed can be configured as well
- Previously, in the current aim right camera position, if the player was close to a surface for the collision system, the camera was moved to the lower body. This has been fixed and improved, it was due to the offsets configured in the camera are used to be close to the hips of the player, so it is used as a rotation point, to keep the upper body inside the camera and make a more natural rotation of the camera and now the offset are properly managed by the camera collision system, in any gravity direction
- Added new option to trigger events when the camera is rotating. This allows the player for example to fire his weapons or powers just by moving the camera, having a simpler and easier control, for example, in the top down view and also in free mode if needed
- I noticed that the rotation of the camera was a little awkward in both first and third person, and thought it could be a not proper setting in the player camera values, but I have seen that adding some extra fields could improve this, so instead of a rotation speed used to multiply directly the input of the mouse (or gamepad or touch joystick), with same value for both views, I have separated that field into vertical and horizontal speed for both first and third person separately. This allows to have a much precise camera rotation and more customization for it
- Improved lock-on target system for the camera, allowing to change between targets on the screen using the camera input direction (mouse, gamepad, touch joystick), so according to targets on screen, their position from the camera center, their position direction respect camera center and mouse movement direction, the next target selected is calculated with a great accuracy. This allows to have a better lock-on target system similar to games like dark souls, the legend of zelda, sekiro, etc… Also, this can be used on any view mode, with weapons/powers and with the future melee combat system
- Added option to change target to look on the lock-on to just use horizontal movement in the mouse/gamepad/touch joystick to select the target to check, being selected the closest on left or right direction to the center of the camera
- New option in player camera to configure if the mouse wheel can be used to move the camera backwards or forwards, similar to skyrim. There are values to configure when the view changes from third to first person, according to the distance to the pivot camera, along with camera movement speed and an extra offset, so the camera can be moved backward with a farther distance than the default value in the camera state. So this allows to change from third to first person and vice versa (if the mouse wheel is rotated in the backward direction in first person, the camera is set to third person again

- Added option to configure a list of camera states that can be used by the mouse wheel to change between these camera states, allowing to configure the range of distance between the camera position and the pivot position, so for example, when the camera is between 0 and 0.4 of distance, the camera enters in first person and the range of 0.5 and 3 of distance, the camera enters in the third person right side state. Events can be also configured for every camera state using the mouse wheel as well
- Added option in locked camera to configure 8 way directional aiming for 2.5d view, similar to contra, metal slug or cuphead
- The option to allow the change of camera from third to first person and vice versa is now located in the main settings of player camera component
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HEALTH SYSTEM

- Added option to configure events when a character resurrects
- Improved health sliders management on characters for the local multiplayer system, with a simpler, clean and more efficient code
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GRAB OBJECTS

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LOCKED CAMERA

- Tank controls and regular movement on locked camera system fixed. A setting used for the top down it was preventing to move the player properly. Now the option along with others can be configured as true or false in every locked camera more easily, including buttons to set the value of that field in all the cameras to true or false
- There is a new option in the locked camera system which allows to configure a list of players to start in a locked view (previously there was only option for one), so now all players can start the game in top down view for example
- Added a new option on locked camera to rotate to left and right, usually used when the locked camera follows player position
- Added option on 2.5d camera limits to configure an initial camera limit for the locked camera system
- The rotation of the player in the aim mode in 2.5d has been improved, now responds much better
- Improved gravity system 2.5d, working correctly now with any gravity direction, including the movement direction according to the orientation of the player respect the camera and the use of weapons/powers and aim with them
- Improved fire fire mode on 2.5d, so weapons and powers can be used without need to press the aim button, just by using the fire button to draw and fire the current weapon/power, allowing to move the cursor to aim freely like in regular mode
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WEAPONS

- Added an option to allow the player to fire weapons (and powers) if the player is not aiming in third person, activating the firing mode and making him to face the camera (just like in aim mode, but without the camera switching to aim state and without need to press the aim key for it). So it only needs to press fire button to activate it
- Added option to allows to configure if the weapon is drawn by pressing the fire button. So if the player is not carrying a weapon, the fire button makes the player to draw the current weapon
- Also, another option allows the player to directly draw and aim the weapon if the aim button is pressed. In this option, the weapon is directly placed in the player's hands and enters in aim mode as well (notice that the weapon was in the player's back before aim)
- This allows to simplify the process to draw and aim weapons, as many users asked for a simpler system, and I think this is a very good solution
- Other option added is keep the weapon in x seconds if it is not being used, like firing or aiming
- Added option to make the player to draw, keep and change weapons quickly without need to use the waypoint system to move the weapon from the position on the player's body to player's hands
- This works like in many games where the weapon appears in player hands when they are selected. Smooth transitions will be added later, so the weapon first appears in player's dominant hand and then, he places the weapon in the default walk position, along with the second hand grabbing the weapon (if the option to carry a weapon with both hands is active). Of course, the current way above can be used too as well, to avoid any transition in the weapon draw/keep action
- Added option to allow the player to move freely while using weapons in third person with an option to not use strafe movement, so if can be combined with the option to fire weapons without need to aim. This will also take care of player's hands with IK management, to place the hand according to player's rotation respect the camera, similar to other games where the player can move backwards toward outside the screen while firing a weapon which is pointing toward inside the screen, like uncharted, control, etc… The system checks the rotation of the camera and player, gets the difference of the angle and according to that value, the weapon moves to the right of left side with options to configure if both hands keep holding the weapon or just once.
- Added option to hold the drop key to increase the drop speed for the current weapon that the player is carrying and is going to drop, allowing also to damage objects on collision
- Added option to activate the aim camera in free fire mode, setting the position to its regular position to aim in third person but player stays in free fire mode
- Added more secondary weapons as attachments, in this case, the spear launcher for the assault rifle as example, having the grenade launcher and the spear launcher to select in the same attachment zone

- Added option on weapons to configure if the arms rotate in the right axis (up and down) toward the camera direction when the player aims. This looks like the player is actually moving his arms to aim up and down, with a more organic behavior, so the rotation in the upper body will be more limited combined with arm rotation, getting a more dynamic player. There are options to configure speed rotation, clamps values with top and bottom maximum rotation values and how much rotation is applied according to camera rotation. Also, the rotation point where the weapon and arms are rotated can be configured in any place, according to where the weapon is carried in player hands (for example, the rotation point can be placed close to the right shoulder using the assault rifle and most weapons grabbed with two hands)
- Added option to configure random rotation torque on shells launched when a weapon is fired (in case it generates shells)
- Now a weapon to start the game can be configured if the option to use inventory to manage weapons is active, using the same previous option to start game with an specific weapon
- Added an option in weapons and powers to use or not the mouse wheel to change between powers and weapons (previously it was active by default)
- Improved custom editor inspector for weapons, to configure the path used for hands, weapons and the positions where weapons are placed, including do position handle gizmo, allowing to move and rotate these positions and transforms easier than before, without need to select a certain transform, just needing to select the weapon and the gizmo shows all the handles needed. Also, it allows to enable/disable which positions are shown in the editor, to make easier to configure a group of these positions instead of show all of them at the same time
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INVENTORY

- Added option in the inventory manager to activate the examine object window in the inventory before pick an inventory object. it uses the examine window and it is similar to games like resident evil when the player takes an object to add it to the inventory
- The save file info now stores the current slots amount in the inventory, so even if this changes during gameplay (like getting a bag to increase this number of slots), it will be stored and loaded
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VEHICLES

- Added option on vehicles to draw weapons when player gets off if he was previously carrying a weapon
- Fixed issue with interface system on vehicles setting the slider values on the 3d HUD at the start of the game, making values to maybe vary from their actual values on the inspector, now it works properly
- In local multiplayer, every player is able to get on and off from a vehicle. The system is able to know which seat the player will be, by searching the closest one to the player. If he is a passenger, he can't drive, just rotate his camera around the vehicle. Only the player on the driver seat will be able to drive
- Added a new vehicle,, with a more arcade control and based on physics too, which can fly, move up and down, forward and backward and to the sides, along with rotate toward right or left
- General improvements, including tweaks for the hovercraft and hoverboard to get a better control
- Added options to configure shake players body on vehicles while driving from collisions according to impact direction and move players body slightly according to input on vehicle (later this will change to actual velocity direction)
- Improved gravity system on vehicles, and similar to the player, it has the same platform management to check when to move with them, like a moving or rotating platform without need to activate the gravity manipulation system. Also, for object circumnavigation, it has been added the same option to check hard edges than in the player, so the vehicle rotates toward the next surface of the object, according to if it is moving forward or backward
- Added new vehicle type: chair, just to make the player to sit, besides that, It literally does nothing, besides the player sitting or getting up.. But it can be used for things like a chair, a bed, etc... so you can place a character in a certain position for anything you need
- Motorbike stabilization has been improved, using torque for it and it works in any gravity direction
- The interface system on vehicles allow now to move and rotate every panel in that interface (there is a list where any amount of panels of the interface can be configured to being able to move and translate them). For this, in every panel, 3 button are configured, one to move the panel, one to rotate it and one to reset its position and rotation. To move or rotate, just need to press and hold the left mouse button and move it to apply movement or rotation to the selected panel
- Added option on the motorbike to allow the player to place the right or left foot on the ground when the speed is close to 0. The motorbike also inclines to the side where the foot is placed which is selected by checking the current inclination of the motorbike and the side where the inclination angle is bigger is the side where the player leans. When the speed is higher than the close value to 0 configured, the motorbike is rotated again

toward the center and the player places his foot back to its regular position on the motorbike.There are options for foot movement speed, motorbike inclination amount and rotation speed

- Added option on action input manager to activate a manual control of the movement and camera directly in the editor, with for float fields using a range type, for vertical and horizontal value for both input. This can be used to test the movement of a vehicle without need to drive it without using external input (keyboard and mouse/gamepad), use it a a debug, etc...
- Added option on vehicles get the input values to steer smoothly (like previously) or at once. This can make land vehicles such as car or motorbike type to rotate quickly according to input (it is a different option from steer input speed)
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MAP SYSTEM

- Improved map system, allowing to be used for different players at the same time and including new management of the system
- Now, it allows to generate all the map tiles created for every floor/building/zone in editor mode, avoiding to generate those elements at the start, though there is an option to do it at that moment too. And of course, they can be removed or disabled, to avoid blocking the view while working in the level
- Improved map zoom, now the drag map speed with mouse changes according to map zoom value, so the higher the zoom is, the drag map speed decrease to move the map with a proper speed with the mouse and viceversa
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AI

- Added an option for the AI to ignore the range vision when he gets up from ragdoll state so even if the player is behind it, the AI will set the player (or any other faction enemy) as its target. There is also a float field to configure how much time the range vision is ignored after get up
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PICKUPS

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TUTORIAL SYSTEM

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POSSESSION/OVERRIDE SYSTEM

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GRAVITY SYSTEM

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INTERACTION ELEMENTS

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DEVICES

- Added a new device to examine, the radio, which uses the same system as in vehicles and in the smartphone app, loading the songs from the file folder, allowing to play press the buttons on it, like play music
- Added the option to use the interaction button for the code panels without locking the rest of player actions. This actually is a general option for the electronic devices, which has been improved as well.
- This is the system which manages different interaction elements in the asset. Now one of the new options is use free interaction with devices which means that the player is able to move while he interacts with that device. An example is the code terminal with the option to don't pause player active, allowing to use the mouse press or the interaction button (E by default) to press the keys, similar to games like doom 3. Previously, only the mouse was able to do the press. Now more free interaction devices can be added, to allow the player to use them while he still being able to move and rotate the camera
- Along with this, it has been added an option to place the weapon in a lower position and disable the current reticle and enable a separated one, to indicate the player the current state, when he exits the device trigger, the weapon and reticle state are back to normal
- Also, this general system also manages weapons when start and stop using a device, and in lockers the weapon states was reset after exit, instead of only when enter. Now the player draws his weapon when exit if previously was carried
- Finally, another option has been added to configure a separated lower position for the weapon, so two positions for lower weapon can be used, one for collision detection on surfaces and other for free interaction devices
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INPUT MANAGER

- Improved custom Input Manager performance by removing a foreach loop which basically contained all the possible keycodes valid on unity. instead, in every action from the class Axes, I have added a keycode variable field, so now, instead of typing the action key, like Space for jump, it has a list of keycodes
- More improvements to the input system, focused in the performance, removing some checks and loops not needed, including gamepad and touch controls. Now the code is shorter, simpler, faster and better.
- Replaced the old input system on vehicles with the new one using events
- The system is now able to manage multiple gamepads at the same time and use the keyboard as well as an extra player when the local multiplayer is being used
- Added new system to configure actions that maybe are triggered when a key is held by a certain amount of time, so it can be configured if the action to trigger is called while the key is held or when it is released after that time pressing down the key. This is used for

example for the free floating mode, which is activated by holding R key during 1 second without need to release the key. At the same time, the gravity power is activated by just pressing R once, so this system allows to configure different actions in the same key by configuring the amount of time to press the key to trigger that action

- All the previous input functions that needed to be added in a component to use it as an action for the input have been removed as the new input system with events doesn't need it anymore and allows a lot more of customization without need to add any code
- Added new field to touch joysticks to configure extra movement value to the touchpad type
- Added option to toggle movement and camera orientation for vertical and horizontal value, allowing to invert any of these player movement and camera rotation values
- Added options on touch joysticks to configure separated speeds for vertical and horizontal axis values when a joystick is used as touchpad
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POWERS

- Added option in powers to fire them without need to aim, just like the weapons. This allows a similar control to games like infamous
- Added in powers the same option that in weapons to make the player's head to look in the aim direction when he is using powers
- The same option in weapons to move freely has been added to powers as well. The arms are rotated smoothly according to camera direction, setting which one (left or right) is used to fire the power according to camera direction, similar to games like infamous first light
- Added same rotation point option that in weapons to powers, so the player’s arms are rotated using a transform position as center of the rotation, so the arm rotates toward the camera direction for a more organic aspect
- Added option in powers to configure custom rotation speed values for vertical and horizontal rotation of the camera when player aims in third person, like in weapons

OTHERS

- Added a new menu in the main menu scene to select scenes. This is due to I will start to add little scenes demos to try more specific features and systems, which will allow to see and try these elements more easily and manage these scenes faster. It is a simple system which allows to configure as much scenes as needed and configure image, name and description, setting a scroll rect list
- Improved the system which shows damage numbers in screen for players, NPCs, vehicles, etc… Before, it used 3d text mesh to work, but now it uses the UI, setting the damaged object as target followed by the numbers on screen. Also, it has options to configure if the movement amount made by every number takes into account the distance to the target, to avoid the numbers move too far from its target when the player is far away from that it. This also allows to show the damage info in split screen, so other players can see the damage received by any object
- Added options in the menu to change the player movement and camera orientation in game, allowing to invert the horizontal and vertical directions of each input

- Removed all the getcomponent lines from the start/awake functions on the scripts related to the player for those variables which can be assigned in the inspector. This will decrease the start time
- Similar to how was made with the components in the player, I have removed all the getcomponents lines from the start/awake functions on all vehicle components, setting these elements as public fields and assigned in inspector, reducing the start time
- Fly mode removed from being activated in the player modes window to improve it on 3.0
- Fixed bug when player detected more than one vehicle to get on at the same time, which can cause that the current vehicle to use could be removed when player exits from the trigger of one of the vehicles while keeping inside the other trigger, so the using devices systems lost the reference from the current vehicle to use in the range of the player. This could cause an exception when player tried to get on the current vehicle, since that reference was removed by the other vehicle. Now current vehicle is currently assigned
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GAME MANAGEMENT

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ISSUES/BUGS FIXED

- Weapon meshes that are hidden while the player doesn't use them are correctly disabled if the option to disable their meshes while not being used is active
- Fixed an issue from some time ago, related to change views for third/first person and viceversa with weapons, causing that the position of the carried weapon is not reset properly, it only needed to stop the coroutine which had assigned the weapon movement, literally, just call the function to stop the coroutine
- Fixed bug on powers, when using homing projectiles on player, another projectile was fired
- Fixed bug in drop object inventory button, which sometimes, didn't enable the submenu to select the amount of objects to drop
- Fixes some bugs in the general save system which were causing to not save the info properly in the player's inventory, inventory bank and weapons in the player
- Fixed a bug in the save system which was causing to not save/load properly the info of every slot

- Fixed bug on ragdolls where the component to apply upper body rotation on aim weapons/powers mode in third person was active while the ragdoll is enabled, being the upper body active for a brief time, causing an awkward behaviour on some occasions to the ragdoll if that character was in aim mode
- Vehicle meshes are correctly faded with transparent shader when it is destroyed, previously the component outline object system was not correctly disabled if a vehicle was destroyed, so the shader weren't applied correctly. Now, the component outline object system is disabled using the events settings triggered when a vehicle is destroyed
- Fixed the option in vehicles to launch passengers on collisions, now the vehicle is correctly removed from the using device system of every passengers, avoiding to keep that vehicle as a device to use even if they are far from it
- Fixed issue on camera vehicle, which wasn't detecting which camera view was using the player (first or third person) when entering vehicle, which could make that the camera on the vehicle is not configured in the same type of view. This only happened on those vehicles without weapons
- Fixed issue on weapon wheel selection menu on touch devices, the wheel wasn't closed correctly once the finder is released from the screen
- Fixed issue on weapons attachment system at the start of the game which was setting the initial state incorrectly in those attachment which are disabled while the weapon is kept or only carried
- Fixed issue with gamepad triggers to use actions that could by of type hold button. The reason why it didn't work properly before it was due to it wasn't taking into account the type of press to check, down, hold or release, for those gamepad keys that aren't buttons, but in this case, axis. But now, they work properly, with actions like aim and fire an automatic weapon (and of course, the rest of actions)
- Removed bug when switching from third person to first person, if you aim immediately after switching you will be unable to fire until switching back to third person
- When player gets on vehicles, the device list is correctly removed except the current vehicle, so the player can interact with it to get off if player uses the interaction button. Previously the list can keep all the current devices detected in the range of the player when he got on vehicles, which could lead to some issue on screen info and devices to use
- Fixed issue on racks (usually used to open secondary paths with the player crouching) where the panel of the rack wasn't moving after using the interaction button, it was due to the transform which is displaced didn't have as a child the mesh of the panel, so it looked like the panel didn't move
- Fixed issue on fixed hide position prefab in the car, the system wasn't properly configured, causing an exception
- Fixed issue on map which happened if the current map have references from a previous map creator, with empty floors and building list, which could cause an exception. Now this is checked in the map system and it is disabled if empty references are found
- Fixed issue on the checkpoint system which was causing to not save properly the current place found

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LOCAL MULTIPLAYER

- Added initial version of local multiplayer, configured manually for 4 players as an example, though more can be added or removed, for update 3.0, the whole local multiplayer system will be complete, being an automatic system which will allow to configure the amount of players ingame and setting the split cameras according to the number of players. For now, the local multiplayer is meant to be used only for third person, first person for local multiplayer won't be ready until full body awareness is added
- Players can damage each other with weapons, powers, objects collision, etc…
- Map system can manage different players, showing to every player the position of the map where he is, even if every player is on a different building of floor from the rest of players
- Waypoint platforms and elevators can manage any number of players, moving them above moving/rotating objects

- Map Icon types configuration and management have been moved from Map System to Map Creator, so these elements are configured from a single component instead of Map System which is now a component used on every player in the level
- Added the initial system to configure multiple players on the level for the local multiplayer. This system allows to configure any number of players and set different split camera views, such as 2 player on vertical or horizontal separation, 3 player, 4 players, etc... and where to configure every camera, including position and size (upper or lower part, left or right, center, etc...)
- Other stuff for the local multiplayer has been checked, like how the canvas must be used and configured to take into account multiple HUD for the local multiplayer, including also how to make an UI element to follow a position in the screen
- All the systems which shows icons on the screen to follow a position on the 3d world already work with multiple players on screen, with any resolution, any number of split screens and with any size
- The system now allows to copy and paste or drag and drop any type of player controller inside the main parent of the game manager, allowing to the split screen system to detect and use new prefabs of different characters, like players with different 3d model, stats, inventory, weapons, etc….
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SAVE SYSTEM

- Improved save system, focusing the settings of the file names and if the system uses a relative path or not to save the files
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CLIMB SYSTEM

- Added system to hang and climb a ledge. By default the player stills on the ledge until the vertical input is pressed, if the player press forward, the player will climb, if he press backward, he will lose the ledge
- The hang and climb action can be made in both first and third person view (and any other type of camera view)
- On 3.0, this will be extended for the whole climb system and also, this is a separated system (the previous climb ledge option was inside the player controller itself, so now is much cleaner and simple to manage)
- Also, it has options to keep and draw the weapon automatically once the climb action is over, checking if the player was carrying weapons previously if the option to draw them again is active (in third person just needs a little offset to place in the exact position without that jump from the end)

- It allows also to only hang from a ledge if the player is pressing the positive vertical input (moving in forward direction) or if the system always check for climbs without player moving forward
- The system also allows to jump when the player is hanging from the ledge, so the player can choose if he wants to climb the ledge or jump
- Also, the system checks for moving platforms, so the player is translated correctly on them while is grabbed to the ledge. This is combined with the system in the player to move properly on platforms which are rotating or moving
- The transition from climbing to regular state has been improved as well, being much more smoother now. I have also started to structure in my head how the whole climb system will be made, for both breath of the wild and assassins creed style, and they could take less time that I expected at first
- Added ledge zone system to configure zones which usually the climb system wouldn't consider able to be climbed due to a low space for the raycast check, like a ledge in the middle of a wall, so the player can hang from it even if there is no enough space above that ledge to climb
- This system also allows to configure if the ledge can be climbed by the player or not, so the player can grab that ledge and perform other action, like jump from that ledge or lose it
- Added option to check if there are surfaces below the player when he is hanging from a ledge, so if a surface is detected, from a moving platform or if the player is hanged from a moving platform, he will climb automatically
- The ledge zone system can be also attached to any surface collider to prevent the player from grab to the ledge of that surface, with an extra option in the player to check for this component in the current object in front of the player which could be used as ledge to grab. This same component also can be configured as a trigger for the same purpose, avoiding that the player can grab a ledge if he is inside this trigger
- Added automatic hang from ledge. It works by checking the surface in the ground in front of the player, so if no surface is found and has enough depth (at least player height) it is stored as a ledge which can be grabbed by the player
- In that case, the system has an option to show the player that a ledge is found and by making a quick press of the movement key toward that direction (WASD), the player will automatically move toward that ledge, fall and then grab it, taking the control of the movement input for a brief amount of time, making the player to move toward the ledge and then rotate toward it, like regular input could do
- This movement is made by a new function in the player input manager which overrides the actual movement keys with a new vector value (configured using a direction or position to move, in this case, the position of the ledge). This new function will be also used on other elements, like make the player to move to a certain position before play an animation or perform an action
- The other option is that when the player moves toward a ledge, the system will automatically trigger the above function without need to make the quick press key action

- The action to move to the ledge automatically can be cancelled just by pressing any movement direction. It also works in any camera view, from first person, to fixed camera, top down, 2.5d, ,etc...
- Also, the system now recognizes the movement direction pressed to indicate the player to climb or lose the ledge once he is hanging from it (using WASD), so according to camera direction and the forward direction of the player, the movement key pressed is checked, so if it has the same direction, the player will climb, else, the player will lose from the ledge (for example, the player hanging toward positive Z axis and camera looking toward positive X axis, the direction to press is A, other direction will make the player to lose the ledge)
- Added option to only being able to activate the auto hang from ledge only when player is looking at it (with options for minimum screen distance) on first person, on third person is always active. If this option is active in first person, the hang from ledge UI panel will be only active if the player is looking and the ledge position (according to the minimum screen distance settings)
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DIALOG SYSTEM

- Added initial version of the dialog system and it has been faster and easier than I expected (about 2 hours), due to I have it already the structure on text
- This system allows to configure different dialogues, each of one has a list of lines and inside every line, different decisions can be selected. Every decision points to the ID of another line, so it is easy to configure different conversations. Also, every one of these elements allows to trigger events, in the moment the line is changed or when a conversation is over
- There are two components, one in any place/object/NPC to talk, where the dialog lines are configured and other component in the player which receives those lines and manage them in the UI
- Also, along with this, I have added a new system to trigger events remotely. This allows to configure a group of events on an object, using a list of events with a name each one.

Like that, this general system can be called from other component with no relation, searching the exact event to trigger by name

- An example of this is the conversation with this friendly AI, which by default, doesn't follow the player when he finds it. So the conversation allows to get the remote event system of that AI and trigger it from the player using the event settings of the dialog system, activating in this case the option to follow the player and sending him as the target to follow and disabling the dialog system from that AI
- All of that without need to use code (of course, for very specific actions, additions could be needed). So the system is very flexible and customizable so far, contains many options and it will be improved with new ones in 3.0
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