Implement one single project files for all branch

Explanation of Update:

Summery:

- This update builds upon (*Jira Ticket at the bottome of this page*) by not only applying the optimized approach in the Updated states but also in the Created stage for PR request. Instead of creating a new git clone, it shares a single project across all branches on the VM. This method aims to optimize the usage of VM CPU resources and reduce the risk of CPU overload when 2-3 PR or deployment pipelines are running simultaneously.

Current Situation:

- In the current PR pipeline process, when a new branch makes its first PR request in a project, the VM creates a new folder, performs a git clone, and then applies **the 'initial running project on Unity Editor' step** during the build process. During this step, approximately 30,000 new files, based on the paramedic ambulance project (2024-06-13), need to be imported into the VM due to the git ignore settings. Additionally, some compilation and adjustments seem to occur during the first time opening the project in Unity Editor, which are part of the initial run. This process consumes a significant amount of time and CPU resources on the VM as Unity Editor performs its initial run.

- **Example**: On current paramedic ambulance project (2024-06-13)
  - *(Due to the difficulty of accurately measuring CPU usage on the actual VM, this data is omitted. However, the difference in time taken to complete this stage during the build process provides an estimation. Please note that this is based on the paramedic ambulance project.)*
  - **(The results may vary depending on how many pipelines are running on and the condition of the VM.)**
  - **If it's the first PR request from the branch:**
    - **On EditMode Test Stage:** approximately 10 minutes
    - **On Build Project Stage:** approximately 10 minutes
  - **If it's not the first PR request from the branch:**
    - **On EditMode Test Stage:** less than 1 minute

- **On Build Project Stage:** approximately 1 to 5 minutes

Direction/Target:

- Modify the PR pipeline process to share a single Unity project file on the VM across all branches, thereby skipping the initial running process.

Concern:

- Sharing a single Unity project file across all branches could potentially lead to unforeseen issues. To address this concern, tests has been conducted by replicating the PR request and merge processes from previous branches of the Paramedic Ambulance project, including AMB-383, AMB-777, AMB-635, AMB-772, AMB-452, AMB-789, and AMB-784. The results of these tests can be reviewed in the PR-Pipeline-test [Jindo-Pipeline-Test] [Jenkins] (varlab.org) builds 141 through 151.

Result:

- While switching between branches, no errors or issues were encountered with sharing a single Unity project across the seven branches. Additionally, the total build time of the PR pipeline was significantly reduced, regardless of whether the branch was new or existing, contributing to the optimization of VM CPU resource usage and minimizing overload issues.

Byproduct:

- By not creating a new Unity Project file for each branch, we also gain a significant amount of free disk space on the VM.

Jira Ticket

Implement a method to use a single project folder and its files for every branch PR pipeline.

Description

Challenge: The VM becomes extremely slow or shuts down when 2 or 3 new branch PR pipelines are running simultaneously. The may slow down the development workflow.

Analysis: The current PR pipeline structure in the Jenkinsfile creates a new folder and performs a git clone for each new branch PR request. This process includes initializing the Unity Editor for

that branch, which significantly impacts the VM’s CPU performance.

Solution: To mitigate this, use the same project folder and files for every branch PR pipeline.