

User Manual



GAMING ED.
CAPSTONE 2022

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1.0 Introduction

Team Gaming Ed. is thrilled that you have chosen to use our RTX Gamification Learning Management System. The purpose of this document is to help you understand how to use our product and continue to use our product for many years to come. We hope that you enjoy using our RTX Gamification Learning Management System and that you realize the potential benefits of gamifying any learning management system in order to improve student learning motivation.

2.0 Installation

As part of the final delivery, Unity Game Engine for the desktop application should be installed on your computer as well as Visual Studio 2022 for the website application. This section will describe the steps you need to take in order to get it up and running in the future. This part is assuming that the PHP files and Website files needed for the project are already up and running on a server (localhost/AWS/Azure) and the database is also up and running.

2.1 Website Application

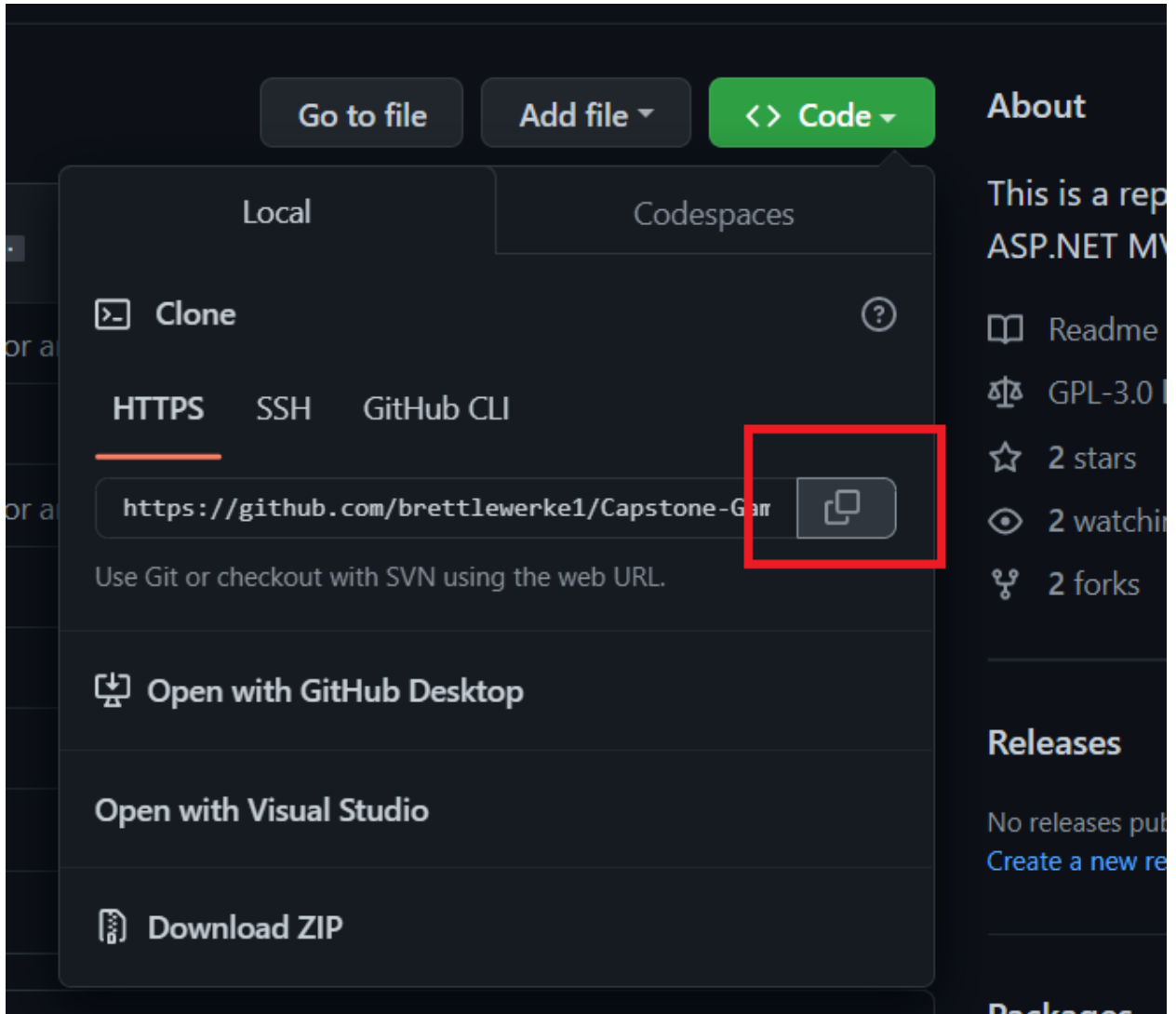
The website application uses Visual Studio 2022 to hold all code. In order to put the website on the internet a server needs to be established either with AWS or via the school servers. In order to run the website on any computer the user can use GitHub Desktop.

In order for the Website files to work properly with a database, you will need to change the *appsettings.json* file to the correct connection keys which include a host name, port number, schema, and password. These connection keys must be entered to connect to the database.

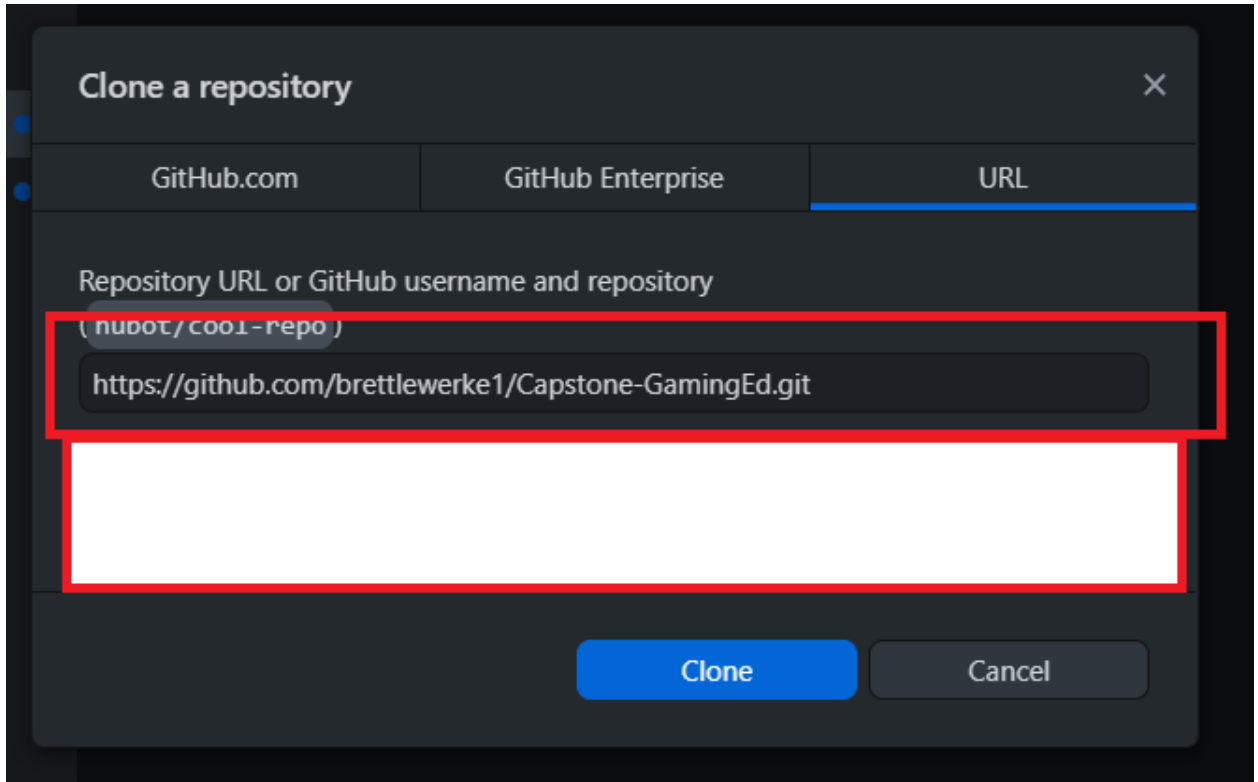
GitHub repository URL: <https://github.com/brettlewerke1/Capstone-GamingEd>

Steps for installing the Website Application:

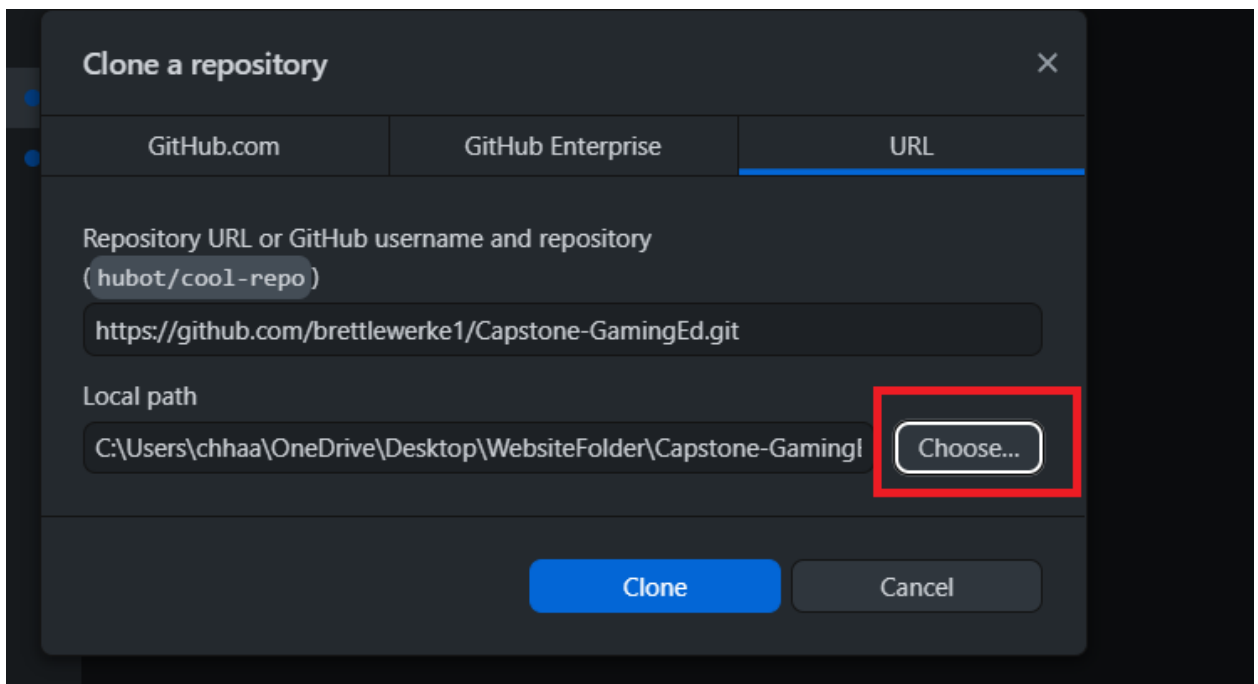
- 1) Open GitHub Desktop and click “Add”
- 2) Click on “Clone Repository”
- 3) Click on “URL”
- 4) Copy URL from GitHub



5) Paste copied URL into GitHub Desktop



6) Now choose where you want to save the program



7) Now click “Clone”

8) Navigate to Visual Studio 2022

9) Click “Open From Folder”

10) Open the folder that you saved using GitHub Desktop

- 11) Double click on the RTXWebsite1.sln file to open the program
- 12) Click on the play button at the top to run the program

2.2 Unity Application

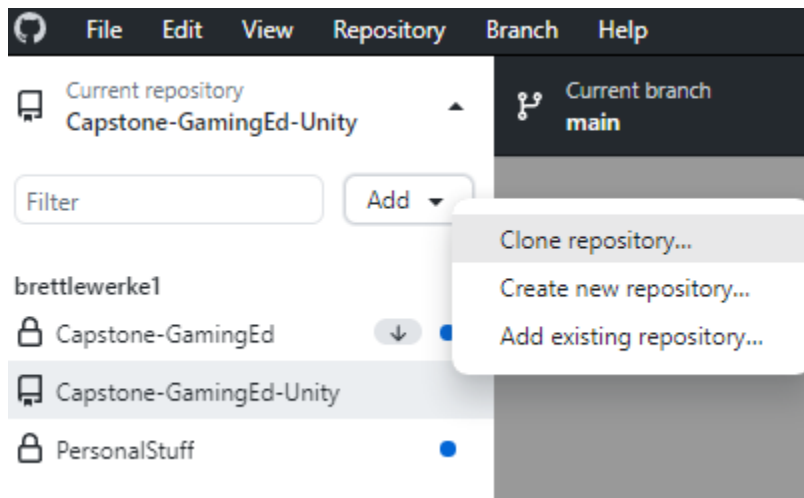
The Unity application installation steps are also quite easy, however a fair bit of GitHub knowledge will be required in order to run it properly. When building the edited application to the final product, Unity gives an executable launcher to run the application with. Since we are not hosting the executable on any server to download it from, you will need to do this via our GitHub repository. You will need GitHub Desktop installed on your computer with a working GitHub account. Once you have downloaded GitHub Desktop, then you are ready to start.

In order for the PHP files to work properly with the database, you will need to change the connection keys in each file which is located at the top. These files are located in the UnityApp folder.

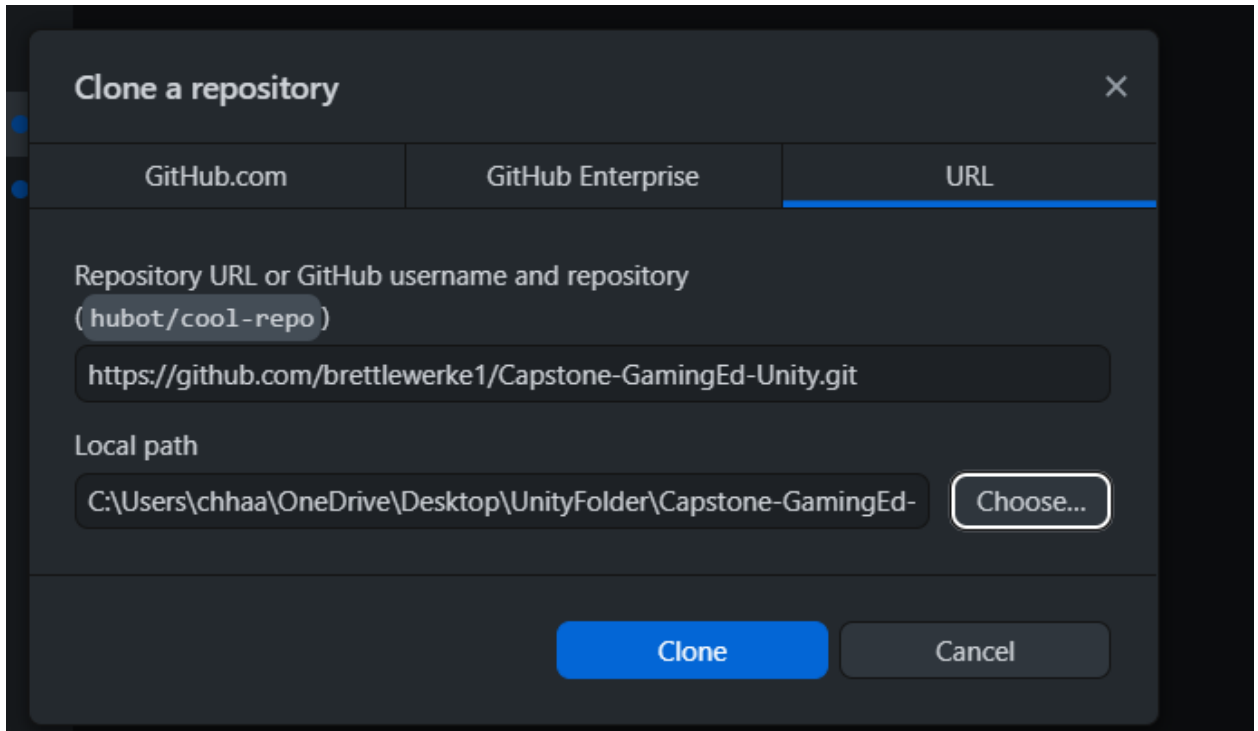
GitHub repository URL: <https://github.com/brettlewerke1/Capstone-GamingEd-Unity>

Steps for installing the Unity Application:

- 1.) Open Github desktop and click “Add”
- 2.) Click on “Clone repository...”



- 3.) Type in URL (located above) of the Unity repository



- 4.) Choose which folder you want to place the repository in (default is name of repository)
- 5.) Click on “Show in explorer”

No local changes

There are no uncommitted changes in this repository. Here are some friendly suggestions for what to do next.



<p>Open the repository in your external editor Select your editor in Options Repository menu or Ctrl Shift A</p>	<p>Open in Notepad++</p>
<p>View the files of your repository in Explorer Repository menu or Ctrl Shift F</p>	<p>Show in Explorer</p>
<p>Open the repository page on GitHub in your browser Repository menu or Ctrl Shift G</p>	<p>View on GitHub</p>

6.) Navigate to the “UnityGame” folder

Name	Date modified	Type	Size
Assets	11/29/2022 10:55 PM	File folder	
Library	11/30/2022 11:46 AM	File folder	
Logs	11/30/2022 11:32 AM	File folder	
Packages	11/29/2022 10:56 PM	File folder	
PHP files	12/9/2022 9:24 AM	File folder	
ProjectSettings	11/29/2022 10:55 PM	File folder	
UnityApp	11/30/2022 8:17 AM	File folder	
UnityGame	12/9/2022 9:23 AM	File folder	
UserSettings	11/30/2022 8:18 AM	File folder	
.gitignore	9/8/2022 3:55 PM	Git Ignore Source ...	2 KB
README	12/12/2022 4:37 PM	Markdown Source...	1 KB
SceneOrder	10/26/2022 5:14 AM	Text Document	1 KB

7.) Open the file “CourseCreator.exe”

Name	Date modified	Type	Size
CourseCreator_Data	12/9/2022 9:23 AM	File folder	
MonoBleedingEdge	12/9/2022 9:23 AM	File folder	
CourseCreator	2/9/2022 2:39 PM	Application	639 KB
UnityCrashHandler64	2/9/2022 2:47 PM	Application	1,205 KB
UnityPlayer.dll	2/9/2022 2:47 PM	Application exten...	27,566 KB

8.) The unity game will now start loading

Please note that you can create a desktop shortcut of “CourseCreator.exe” so you do not have to navigate to the folder everytime you want to use the application. Also, DO NOT edit any file in any other folder as this may break the game. You are welcome to open them and look around but unless you are a developer, I do not recommend changing the files. Also, the superAdmin login information needs to be added to the database manually. Once you have added the superAdmin to the database you should login and add a teacher in order to start creating courses.

(See below figure for correct syntax for Account_Role)

	Account_ID	Account_Username	Account_Password	Account_Role
▶	21	superMan	BatmanSux	superAdmin

3.0 Configuration and Daily Operation

This section is a manual on how to use our product as intended. Especially with Unity, there are certain steps you need to follow in order for courses to be properly placed in the database for the website to use.

3.1 Website Application

The website application is pretty straightforward. Any person using the website can create an account on the website, however they will need to enter the correct course key given to them by the teacher in order to enter further into the website. An account can also be manually created using the database by adding an account into the “Account” table. A player will then need to be created to enter a class because an account can be in multiple classes. The student will click on the corresponding links in the website in order for them to complete course materials.

3.2 Unity Application

The Unity application has certain steps that a teacher needs to follow in order for it to be displayed on the website properly.

3.2.1 Course Creation

In order to make a level, the teacher needs to place a gate down in one of the highlighted areas. Then, once a few objects have been placed underneath the gate, they will need to *right* click on the gate, click edit, then *left* click on each object that they want inside of the level. Then, the teacher will need to click confirm in order to lock those objects inside of the level. If they do not do this, the object will not be in the level and will not show up on the website. Make sure to save each time you exit the object to the main course creation screen or it will not save your information.

3.2.2 Internet Access Requirements

The teacher needs to have access to the internet in order for the students in each course to be displayed. If they try to login and do not have an internet connection, then the login will not work and they will be forced to click back. It goes without saying that other things like uploading a course or super admin abilities would need an internet connection as well.

4.0 Maintenance

This section will go over what you need to do in case there is any maintenance of the application being done. This could include things like switching where you host your code, switching where you host your database, and editing the source code.

4.1 Website Application

If the database is changed for the Website application you will need to change the connection keys associated with the website to the database. The location of the connection keys for the website is located in the *appsettings.json* file in the source code. You may need to change the table names if you are choosing different table names as well, this can be changed through the SQL strings located in each html page. Also, if you are to add a new model to the source code, you also need to add it to the startup.cs file. In order to do this look around for something called a singleton and copy the code from there, only changing the name of the model itself.

4.2 Unity Application

If the hosting service is changed for the location of the PHP files, then you will need to change the URL associated with the PHP file. For example, when we made this project we did not have the money to host the PHP files on a server so we ran it on localhost. Every single URL to the PHP files start with localhost/UnityApp/somefile.php. The local host will need to change with the new URL you are hosting it on. If the database is changed for the location of the data to build the course with, then you will need to change the connection keys located in each and every PHP file. If you would like to edit the Unity project then you will be editing in version 2020.3.29f1, it is unknown what would happen if you were to change the editor version.

5.0 Troubleshooting

This section describes what issues you may run into in our project and possible solutions on how to fix them. For each part of the project, this will outline known problems that we either did not have the expertise or time to fix.

5.1 Website Application

There is really no troubleshooting to be done on the website application. If a link fails to bring you to a correct page then there is a bug that needs to be fixed inside of the website code. There is really no way to fix an issue with a website from a browser. However, throughout our testing we did not find any bugs that would constitute someone needing to change the website code.

5.2 Unity Application

There are some troubleshooting issues that should be addressed with the Unity application. These issues are present due to time constraints and the lack of programming knowledge in Unity. This game engine takes months of learning before you can really understand how it works. A lot of the issues that are addressed here can be fixed by reloading the main course creation page, this can be done by clicking on either “View Course” or “Upload Course”. There are no game breaking bugs inside of the application but I will address some known ones and how to fix them:

Problem: Multiple choice input not popping up when editing an assignment

Solution: Click another dropdown option and then select it again it should now work

Problem: Highlighted object does not go away after deleting an object

Solution: Click on view course then edit again, it should be fixed

Problem: Placing an object while the “confirm” button is still visible

Solution: Click confirm and it should go away

Problem: Gamepad that moves camera keeps moving away

Solution: Click on the view course button then edit again, it should be fixed

Problem: Saving an empty question choice and it moves away

Solution: Click back, then click on the question again. Try to avoid doing this...

6.0 Conclusion

Again, thank you for choosing the RTX Gamified Learning Management System for your learning needs. We hope that you found this product intuitive and beneficial to your learning needs. Best wishes from your RTX Gamified Learning Management System development team and if you have any specific questions you can email any of our team members listed below.

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