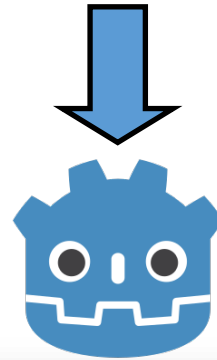


if memory serves

A game to “point” you in the right direction

If memory serves [1,2] is an open source game created by a group of researchers that attended the ACM Annual Conference of Innovation and Technology in Computer Science Education (ITiCSE 2017). The game revolves around teaching undergraduates pointers and was designed using a learning outcome based approach. This allowed for a game that facilitated educational games development within computer science.

The project proposed in this poster is to port “If memory serves” to an open source games engine (we have chosen Godot) as it is currently being developed on Unity. The challenge here is learning a new games engine and scripting language along with it. Also, the art assets will need slight adjustments to better fit the new engine.



To port the game from Unity [5] to Godot [4], we made the decision to remake the game mechanics from scratch rather than translate each script one by one. This decision was made as it allowed us to build the game step by step making clear progress in each sprint rather than having little/nothing until the end when all the scripts were ported over.

Plus this has allowed us to fix any issues as they come up, for example, the text parsing in Unity works differently to Godot. In Unity you can parse plain text files and it will work fine, but in Godot, the engine can only read one line at a time, this has led to the use of JSON files in place of standard text.



This is the typical level in “if memory serves”, you have two characters Addy and Val, in each level, Val must pass Addy the correct item to pass onto the correct table, just like in a program where you must reference the correct object which is a pointer to the desired value. Each level has instructions on what needs doing as seen above. In the picture below is a level in which Addy and Val must create the correct pointers to allow the coffee and cake reach the correct tables. First Addy must create a pointer to the coffee table and Val must pick up the coffee and send it on, in this example only one pointer is allowed at a time so once the coffee has reached the table the pointer must be destroyed and a new one must be created for the cake table.

