

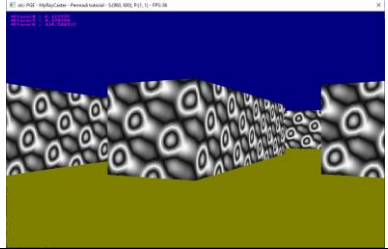



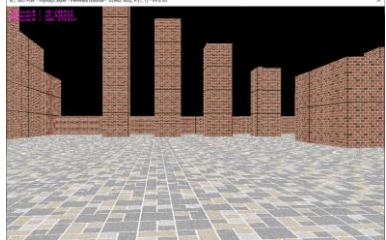
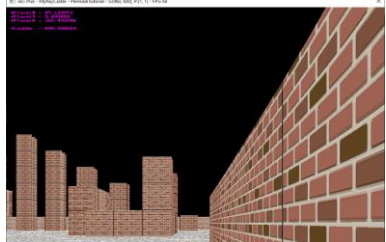
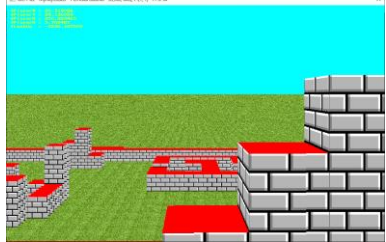
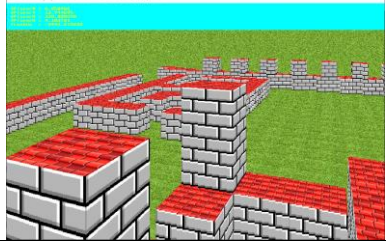
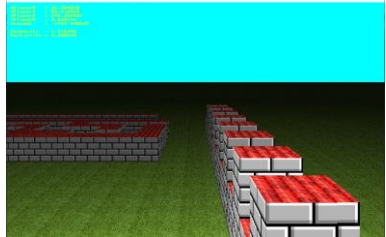


Raycasting implementations – Permadi tutorial

Joseph21, February 1, 2023

All source files on: <https://github.com/Joseph21-6147/Raycasting-tutorial-series---Permadi-inspired>

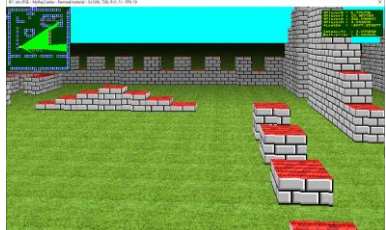
Nr	Permadi tutorial	Source file name	Subject	Preview
1	Parts 03-09 (&15)	main - part 09a (plain rendering, hor. motion, naive distance finding).cpp	Non-textured rendering, horizontal motion, naive distance finding	
2	Parts 03-09 (&15)	main - part 09b (plain rendering, hor. motion, DDA algo).cpp	DDA implementation (instead of naive distance finding)	
3	Part 10	main - part 10 (textured walls).cpp	Added: Wall texturing	
4	Parts 11-12	main - part 12 (textured floor).cpp	Added: Floor texturing	
5	Part 13	main - part 13 (textured ceiling).cpp	Added: Ceiling texturing	
6	Part 14a	main - part 14a (variable height walls).cpp	Added: Variable height walls	

Nr	Permadi tutorial	Source file name	Subject	Preview
7	Part 14b	main - part 14b (variable height walls - improved texturing).cpp	Added: Improved wall texturing for variable height walls	
8	Part 16	main - part 16 (vertical motion - looking up and down).cpp	Added: Effect to simulate looking up or down	
9	Part 17a	main - part 17a (flying and crouching).cpp	Added: Code for flying and crouching of player, in combination with variable height walls.	
10	Part 17b	main - part 17b (textured roofs, optional mouse control).cpp	Added: Roof texturing and optional mouse control	
11	Part 19	main - part 19 (shading - night effect).cpp	Added: Simple form of distance shading	

Elaborations on the Permadi tutorial

Joseph21, April 14, 2023

I posted the Permadi based tutorial series in spring 2022. Currently I decided to elaborate on the Permadi tutorial series with some of my own creations:

Nr	Permadi tutorial	Source file name	Subject	Preview
12	-	main - part 20 (fractional wall heights).cpp	Experiment with walls that are $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$ high – it's trivial to create walls with other fractions as well	

Nr	Permadi tutorial	Source file name	Subject	Preview
13	-	main - part 21a (sprites - basic rendering).cpp main - part 21b (sprites - with column based depth buffer).cpp main - part 21c (sprites - painters algo).cpp main - part 21d (sprites - looking and moving up and down).cpp main - part 21e (sprites - randomly initialized).cpp main - part 21f (demo version with 2D depthbuffer).cpp	Introduction of objects (sprites) using the technique of billboard. These parts build up the functionality so that looking and moving up and down are supported in combination with (scaled) billboard rendering	