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Ray Casting Tutorial – Part 13

May 17, 1996 By fpermadi

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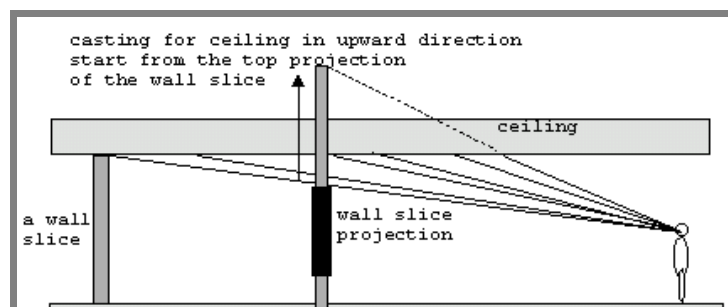
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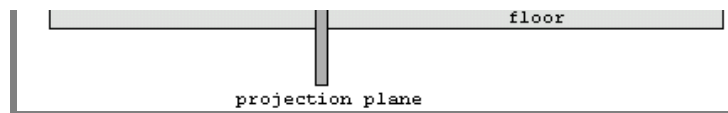
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DRAWING CEILINGS

To draw the ceiling, the floor-casting process can be reversed. Instead of tracing rays from the **bottom** of a wall slice in **downward** direction, trace the ray from the **top** of the wall in the **upward** direction. This is actually pretty straightforward once the theory behind floor-casting has been grasped.

Figure 27: Casting to find the ceiling.





Later, we will explain how to simulate the illusion of looking up, looking down, flying, and crouching. If the programmer does not wish to simulate these, it is possible to draw the floor and the ceiling at the same time. This is because the distance of the player's eyes to the floor and ceiling is equal/symmetrical. (Floors and ceilings are symmetrical since the player's eyes is exactly at the midpoint between floors and ceilings.)

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