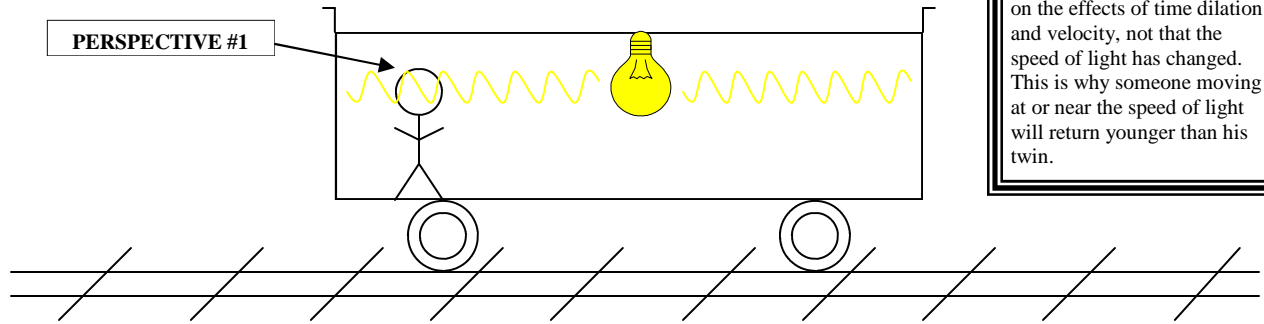


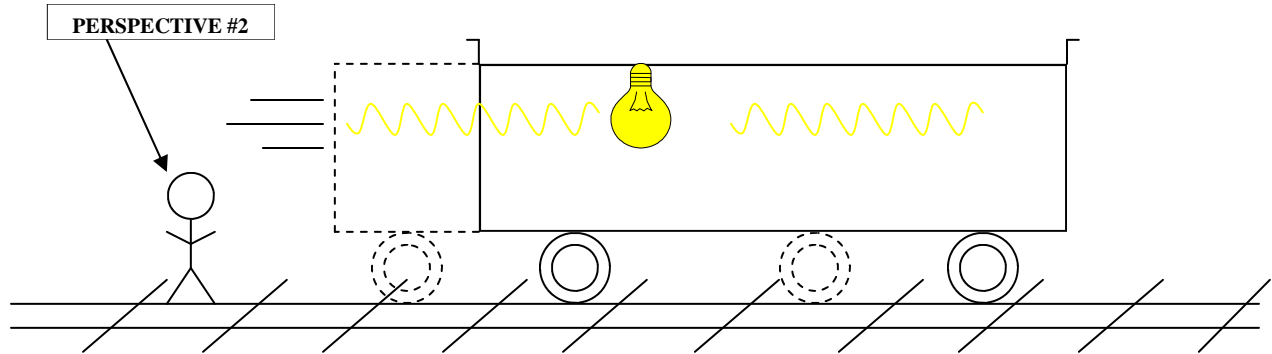
Figure 2.1: SPECIAL RELATIVITY

The first perspective is of a stationary observer measuring the light beams while standing inside a stationary train. The light reaches both ends of the train at the same time.



In all 3 perspectives and in all directions, light is still moving at the same speed (c). The speed of light is always constant. But the differing relative perspectives show the light beam will reach a portion of the train at different intervals, yet only from their discrepant velocity perspectives. Basically, the contrasting measurements are based on the effects of time dilation and velocity, not that the speed of light has changed. This is why someone moving at or near the speed of light will return younger than his twin.

The second perspective is of a stationary observer measuring the light beams while standing outside a moving train. From this perspective, the light reaches the back of the train just BEFORE it reaches the front.



The third perspective is of an outside moving observer measuring the light beams while the train is also moving. The observer is moving faster than the train. From this perspective, the light reaches the back of the train just AFTER it reaches the front.

