On Page 13 of Chapter 7: Survival Models, the course notes states (interpretation of m_x):

> the denominator $\int_0^1 {}_t p_x \, dt$ is interpreted as the expected amount of time spent alive between ages x and $x+1$ by a life alive at age x…

I am unable to comprehend how can $\int_0^1 {}_t p_x \, dt$ be thought of as an *expectation*?