Abstract: Synchronization of oscillators is a universal phenomenon in classical nonequilibrium systems, such as neurons and circadian rhythm. Synchronization is the tendency for nonlinear oscillators to phase-lock with each other. There has been a lot of work on synchronization in the classical regime. I discuss what happens to synchronization in the quantum limit, when the oscillators are near the quantum ground state. It turns out that synchronization survives in the quantum limit despite the abundance of quantum noise. Furthermore, the oscillators become entangled with each other, which is a genuinely quantum feature. In fact, quantum oscillators exhibit an ‘entanglement tongue,’ which is the quantum analog of an Arnold tongue. I also discuss how quantum synchronization can be observed in atomic-physics experiments.