A white dwarf is a type of stellar remnant that is left behind after a star has exhausted its nuclear fuel and has gone through its final stages of evolution. These objects are extremely dense, with masses similar to that of the sun but compressed into a size about the same as that of the Earth. Because of this, white dwarfs have incredibly high surface gravities and are therefore capable of generating intense magnetic fields. In addition, these objects are extremely hot, with surface temperatures that can exceed 100,000 Kelvin. Despite their small size, white dwarfs are among the most luminous objects in the universe and play an important role in the evolution of galaxies.