We will present the definition of a Frobenius $A_\infty$-algebra that extends the classical notation of Frobenius algebras and is a generalization of cyclic $A_\infty$-algebras. The latter being symmetric Frobenius $A_\infty$-algebras that are already extensively studied because of their connection with Fukaya categories. Then we will extend some classical results of Frobenius algebras to Frobenius $A_\infty$-algebras. (Received August 28, 2020)