Since O is a non-associative algebra over R, this real division algebra can not be algebraically isomorphic to any matrix algebras over the real number eld R. In this study using H with Cayley-Dickson process we obtain octonion algebra. Firstly, We investigate octonion algebra over Zp. Then, we use the left and right matrix representations of H to construct representation for octonion algebra. Furthermore, we get the matrix representations of O/Zp with the help of Cayley-Dickson process.