Dyck languages consist of sequences of opening and closing parentheses of different types which are well-parenthesized. Dyck edit distance problem measures the distance of a string from a Dyck language by counting the number of edits (insertions or deletions of individual characters) required to make it well-parenthesized. In this thesis we study the expected properties of Dyck edit distance for a uniformly selected string. We show the existence of asymptotic properties of Dyck edit distance and establish both lower and upper bounds for Dyck alphabets with different number of symbols.