This study attempts to investigate the use of cohesive devices in students’ discussion texts. It examines the types of cohesive devices used by the students in their discussion texts and the contribution of the use of cohesive devices to the cohesion of the texts. This study uses the qualitative method through a case study design and involves six discussion texts written by twelfth grade students of a public senior high school in Cirebon. The data of this study are analyzed by using theoretical framework of three main types of cohesive devices in written language proposed by Eggins (2004), which cover reference, conjunction, and lexical cohesion. This study reveals two findings. First, the cohesive devices employed by the students include reference, conjunction, and lexical cohesion. Lexical cohesion is the most frequent device, with 247 occurrences. This indicates that the students tend to keep track the topic of the text through lexical cohesion. Second, there are four contributions of cohesive devices used to the cohesion of the texts, i.e. keeping track of the participants in the text, avoiding redundancy, organizing the ideas into logical order, and connecting parts of the texts to the topic of the text. Based on the findings, it can be concluded that cohesive devices are important devices to create cohesive texts. Teachers are suggested to integrate activities or exercises related to cohesion in the process of teaching writing to help the students to use cohesive devices appropriately to create a cohesive text.