**Q5:**

**Challenges Encountered During the Project:**

In the process of developing this project, which incorporates a semantic analyzer, we faced several challenges. The primary objective of this project is to receive user input, scan the entire code, and provide feedback on whether the input is correct. Additionally, it offers step-by-step explanations of the given input statements.

The main challenges we encountered during the project were associated with handling syntax and logical errors. Understanding the intricacies of language grammar and performing lexical analysis proved to be particularly challenging. Initially, we had to gain a comprehensive understanding of these aspects before proceeding to construct the semantic analyzer. Eventually, after overcoming these hurdles, the project ran successfully.