Are buf[0] and buf[1] separate variables?

Of course, the literal answer to this question is no. They are two different expressions that involves the single variable buf. The real question is, can we consider them to be separate variables in the context of the discussion in Section 7.9? The answer depends on whether reading or writing buf[i] affects the operation of reading or writing buf[j], for $i \neq j$. This in turn depends on how those operations are implemented. In the obvious way of implementing buf with an array, the two operations will be independent. However, one can envision implementations in which this isn't the case—for example, if buf were implemented as a sparse array.