Let $R$ be the associative algebra generated by two elements $x$ and $y$ with defining relation $yx = 1$. A complete description of simple modules over $R$ is obtained by using the results of Irving and Gerritzen. We examine the short exact sequence of the form $0 \rightarrow U \rightarrow E \rightarrow V \rightarrow 0$, where $U$ and $V$ are simple $R$-modules, and give an explicit classification of nonsplit extensions of simple modules over $R$. (Received September 14, 2008)