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Linhong Wang* (lwang@selu.edu), Department of Mathematics, SLU 10687, Southeastern Louisiana University, Hammond, LA 70402. *Nonsplit module extensions over the algebra of one-sided inverse of $k[x]$* . Preliminary report.

Let R be the associative algebra over a field k generated by two elements x and y , with y being the left inverse of x . The algebra R has been studied by Jacobson, Irving, Gerritzen, Bavula, and others. The known results include the prime and maximal spectra of R , the system of simple R -modules, a faithful representation of R by an algebra of shift operators on an infinite-dimensional vector space, etc. In this work, we give an explicit classification of nonsplit extensions of simple R -modules by examining the short exact sequence of the form $0 \rightarrow U \rightarrow E \rightarrow V \rightarrow 0$, where U and V are simple R -modules. (Received August 20, 2011)