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A group equivariant  $KK$ -theory for rings will be defined and studied in analogy to Kasparov's  $KK$ -theory for  $C^*$ -algebras. It is a kind of linearization of the category of rings by allowing addition of homomorphisms, imposing also homotopy invariance, invertibility of matrix corner embeddings, and allowing morphisms which are the opposite split of split exact sequences. We demonstrate the potential of this theory by proving for example equivalence induced by Morita equivalence and a Green-Julg isomorphism in this framework. (Received August 17, 2021)