A CHARACTERIZATION OF u-IDEALS IN REFLEXIVE BANACH SPACES

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A thesis submitted in partial fulfillment for the requirements of the award of the degree of Master of Science in Pure Mathematics of Masinde Muliro University of Science and Technology
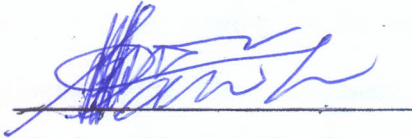
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DECLARATION BY THE CANDIDATE

This thesis is my original work prepared with no other than the indicated sources and support and has not been presented elsewhere for a degree or any other award.

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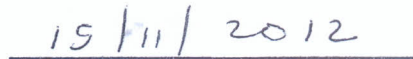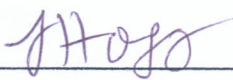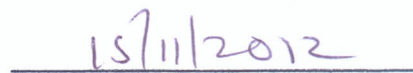**SEP/G/01/09**

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The undersigned certify that they have read and hereby recommend for acceptance of

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ABSTRACT

In this thesis we show the reflexivity of a Banach space, that is spaces embedded in their biduals. The concept is realized for the case that the canonical embedding into its bidual is surjective. We characterize u-ideals in Banach spaces having reflexive properties. We show that u-ideal achieves its norm on closed unit ball and for any reflexive Banach space X; u-ideal is always a closed ideal. We also show that u-deal contained in Jacobson radical is a zero ring.