FINAL YEAR PROJECT
LIBRARY MANAGEMENT SYSTEM BASED ROBOTIC BOOK RETREIVAL SYSTEM

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FINAL YEAR PROJECT REPORT

LIBRARY MANAGEMENT SYSTEM BASED ROBOTIC BOOK RETREIVAL SYSTEM

A PROJECT REPORT

Submitted by

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in partial fulfillment of the requirement for the award of the degree of

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APPROVED

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DEPARTMENT OF ELECTRICAL ENGINEERING

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DECLARATION

It is declared that the work on the project “Automatic Book Retrieval System” is our own work, except where otherwise acknowledge in text and references. This work is not submitted in any form for another degree at any university or institution for tertiary education and shall not be submitted by us in future for obtaining any degree from this or any other University or Institution.

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ABSTRACT

The rapid growth and uses of emerging technologies has changed the traditional library into automated, electronic, virtual and digital library. The conventional methods of maintaining library are no longer effective. The concept of library automation in Pakistan is not new, but the situation is still not leveled with developed nations. So we need to prepare an automated library system to meet higher levels of services than ever before with major strategies for keeping up the with users demands.

This report describes a book picking and searching mechanism for performance enhancement of existing library systems in world. Proposed system uses a data base storage system in which VISUAL STUDIO (2013) manage all the library data efficiently. After searching the desired book user pressed request button. The visual basic process the command and as in it many algorithms are established to reduce noise, improve the speed and remember the location by getting feedback from the motors after that it gives a command via serial communication to Arduino controller attached with stepper motor driver to drive three of the stepper motors the CNC like hardware structure having three axis worked with stepper motor which is used for generating the steps to rotate the ball screw, a barcode reader is also attached to identify the exact location of book and also for data sorting. The feedback system is used when one motor stop then it gives the feedback and at the same time other motor runs. After identification the robot extract the book in 1 minutes to maximum 3 minutes with the help of electromagnetic hand and placed this book into the basket attached to the rack. 7

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