

Modelling Terminal Examination System For Senior High Schools In Ghana

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Abstract: Modelling terminal examination management system using link softwares for Senior High Schools in Ghana is reported. Both Microsoft Excel and Access were integrated as back and front-end respectively. The two softwares were linked for update of records as well as security purposes during data entry of students' records. The link was collapsed after the deadline of data entry to convert the access table to local and enhance data security. Based on the proposed system, multiple parameters such as invigilators, marks, grades, attendance, and absenteeism were assessed and identified for the various subjects in the entire examination processes. The System applied structured query language(sql) for searching specific named parameter for analysis where the total number written papers, number of students and performance could also be accessed.

Index Terms: Modelling, integrated Softwares, Database, Terminal Examination.

1 INTRODUCTION

Examination in our educational system has remained a major means of measuring and assessing student's performances and skills. Examinations results determine the progress, placement and means of securing admission into further studies and employment. Invigilation is a way of ensuring that the examination is conducted under secured environment devoid of fraud or malpractice caused by candidates and keeping the records of both invigilators, candidates as well as parameters of the contents of the written papers requires the use of database modeling. The creative use of computer technology in education has the capacity to increase the quality of people's lives by enhancing teaching and learning [1]. A database management system (DBMS) is structured way of keeping, updating and retrieval of database on specific query parameters. A database [6] is a collection of tables, queries, forms, reports, program code, and the interrelations of these objects. Tables are the containers of data arranged into rows (records) and columns (fields) The main function of a DBMS is to provide efficient and reliable methods of data retrieval to multiples users. A database is a collection of information stored for easy organization and exploration. Databases are used in various situations such as keeping a record of friends, registering employees job attendance, counting the number of students in a classroom and keeping a record of their grades. This means that we have been using databases all our life. . Most DBMSs deal with several users simultaneously which try to search several data items. A well-designed student record system, whether using paper documents or automated interface systems, yields numerous benefits.

The most significant of these database structures is the ability to report information for decision making about individual students, schools and programs [4] This paper focuses on the design and implementation of modelling terminal examination management system where the process of the examination papers, invigilators as well as the details of the candidates would be stored and retrieved for decision making by school management. This application enables system administrators with the right permission to insert new records for each subject taken as well as updating the records. The integrated tools used in designing this application are Microsoft Excel and Access database. The significance of this application are as follows.

- I. Assessing the responses of both invigilators and candidates during terminal examinations.
- II. Data analysis of students' academic performance for decision making such as promotion, scholarship, withdrawal and selection of candidates for awards and quiz competitions.
- III. Budget analysis for the examination units for the supply of examination materials.
- IV. Detecting examination malpractices during and after the examination from both invigilators and candidates.
- V. Comparing students previous academic records with the current examination.

2 RELATED WORKS

Databases are collections of interrelated data in such a way that the collections can be designed using many file but not a single file [5]. The design and implementation of automating student examination results was studied by [3] where he compared the manual process involved in generating student's examination result and sought ways of automating the system for effective operations. Web based student information management system was studied .The design and implementation of a automated student information system and user interface is to replace the manual paper records [2].

3 SYSTEM MODELLING

The database modeling involved five(5) tables which include: Invigilators_Table = (T1), Attendance_Table = (T2) Classlist_Table = (T3) StudentsMarks_Table = (T4), Classification Table = (T5).

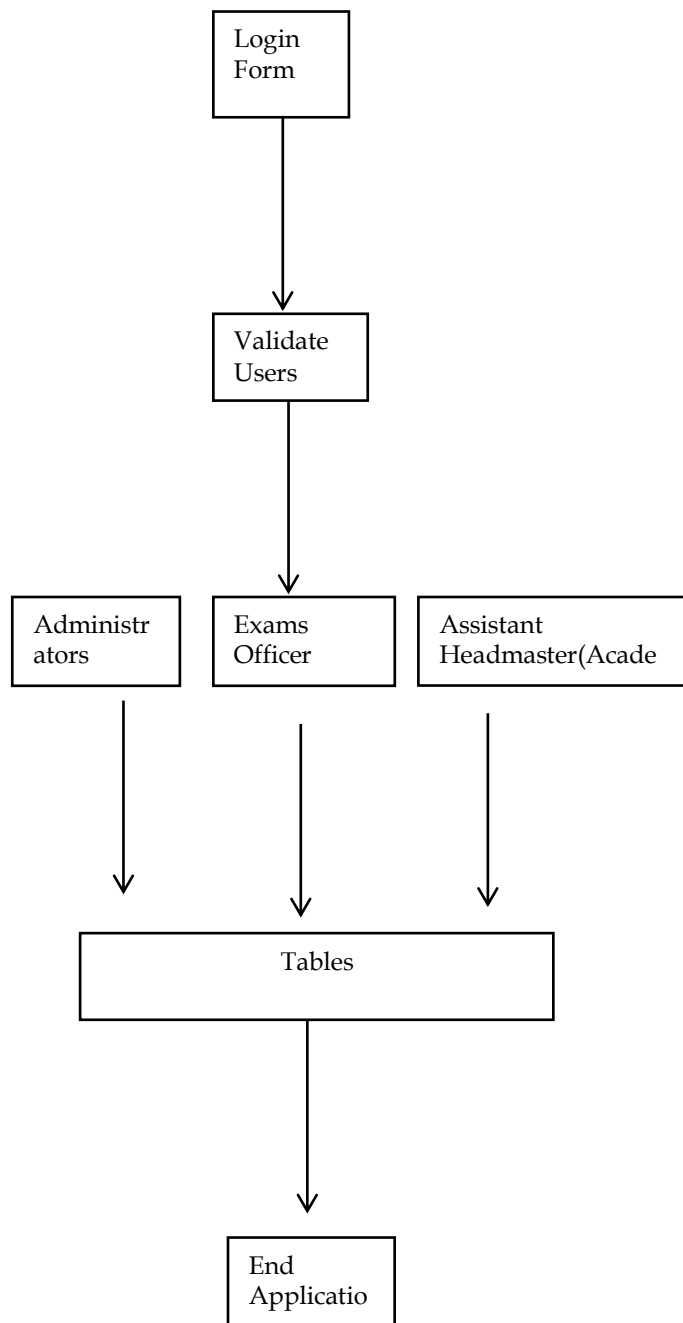
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The fields for each table are indicated in the table below.

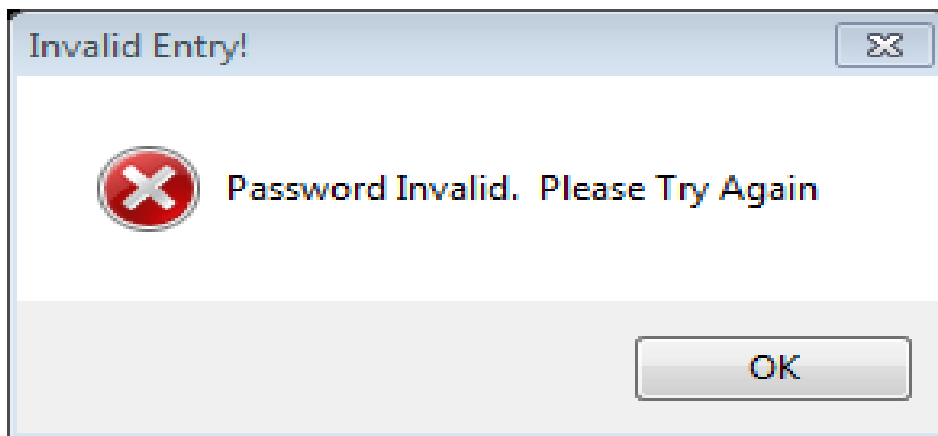
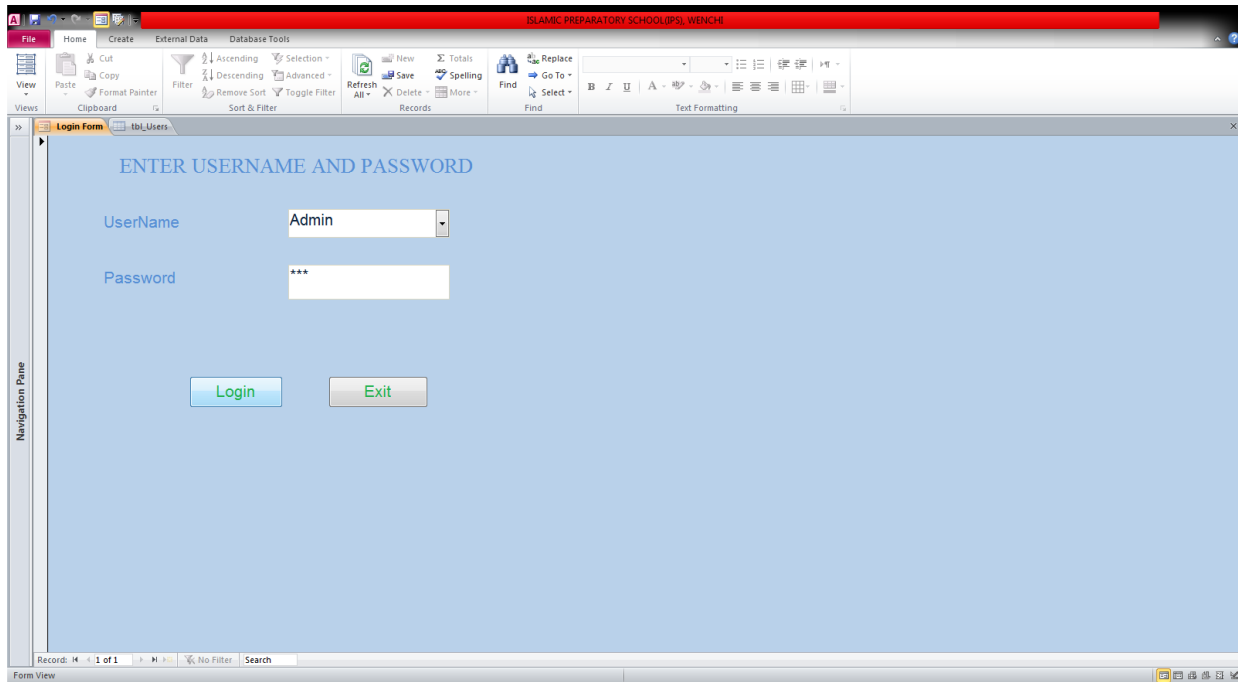
Tables				
T1	T2	T3	T4	T5
Fields	Fields	Fields	Fields	Fields
Staffid	Studid	Studid	Studid	Staffid
Subject_title	Subject_cod e	Fname	Class_score	Fname
Subject_cod e		Lname	Exams_scor e	Lname
Date		Cicode	Total	Nsubjects
Time		Programm e	Grade	Subjtype
Duration			Rank	Subject_cod e
Enrolment			Remarks	
Session				
Paper_type				
Venue				
Form_level				
Clname				
Cicode				
Academic_y r				

Each field parameter is explained at the description of the database design. The data is first entered in Microsoft Excel 2010 and then linked to Microsoft Access 2010 before converting to local table to break the link.

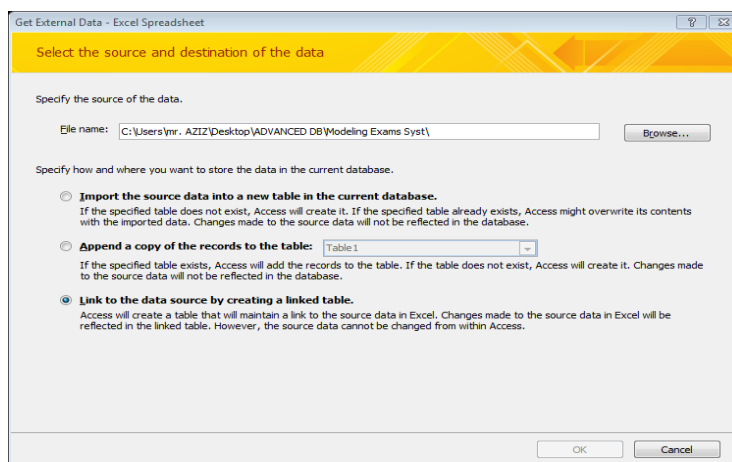
4 SYSTEM FLOWCHART



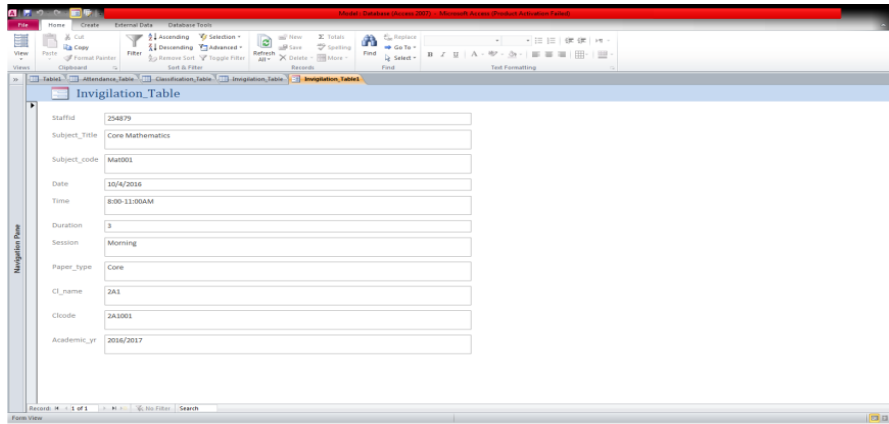
5 APPLICATION FORMS



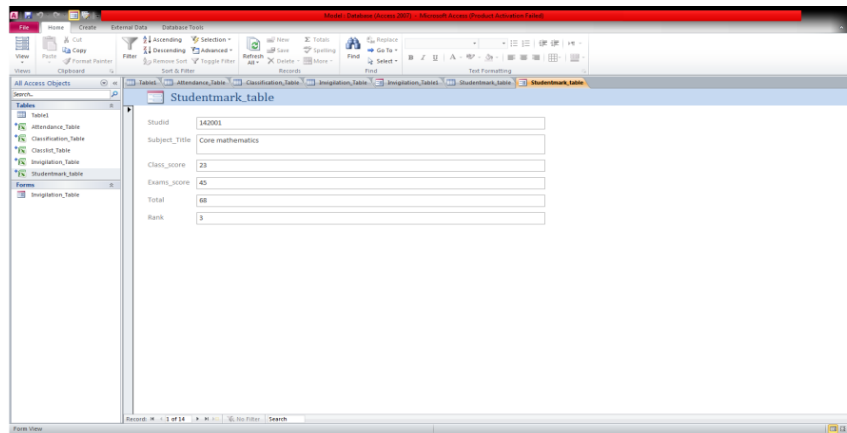
Login Form



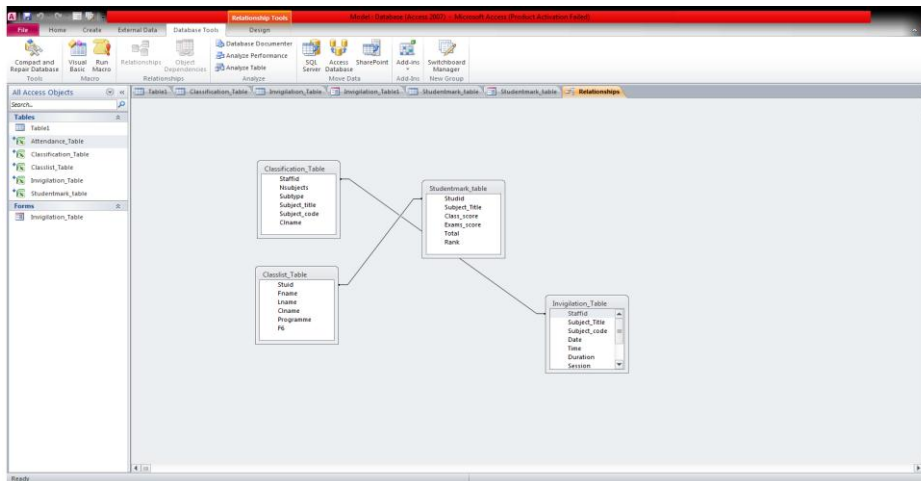
Linking Ms Excel to Ms Access



Invigilation_Table



Studentmark_Table



Relationships

6 CONCLUSION AND FUTURE WORKS

Modeling Terminal examination management system has been studied where two Microsoft office tools were used. The system applied Microsoft Excel as back end and Microsoft Access as front end user interface for student data entry and invigilators as well as examination content analysis. The two softwares were linked for update of records as well as security purposes during data entry of students' records. The link was collapsed after the deadline of data entry to convert the access table to local and enhance data security. Based on the

proposed system, multiple parameters such as invigilators, marks, grades, attendance, and absenteeism were assessed and analyzed. However, future works will consider integrating class room supervision, attendance as well as continue assessment automation.

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