DESIGN AND DEVELOPMENT OF A TELEVISION TICKER SYSTEM

BY

Md. Shajedul Haque Rana
ID: 142-25-403
Department of Computer Science & Engineering

This Report Presented in Partial Fulfillment of the Requirements for the Degree of Masters of Science in Computer Science and Engineering

Supervised By

Dr. Sheak Rashed Haider Noori
Associate Professor & Associate Head
Department of CSE, FSIT
Daffodil International University

DAFFODIL INTERNATIONAL UNIVERSITY

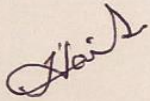**DHAKA, BANGLADESH**

MAY 2019

APPROVAL

This Project titled **"Design And Development Of A Television Ticker System"**, submitted by **Md. Shajedul Haque Rana (ID:142-25-403)** to the Department of Computer Science and Engineering, Daffodil International University, has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of M.Sc in Computer Science and Engineering and approved as to its style and contents. The presentation has been held on 5 May 2019.

BOARD OF EXAMINERS

Dr. Syed Akhter Hossain   Chairman
Professor and Head
Department of Computer Science and Engineering
Faculty of Science & Information Technology
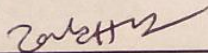Daffodil International University

Dr. Sheak Rashed Haider Noori   Internal Examiner
Associate professor and Associate Head
Department of Computer Science and Engineering
Faculty of Science & Information Technology
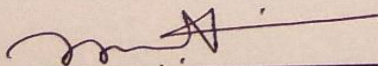Daffodil International University

Md Zahid Hasan   Internal Examiner
Assistant Professor & Coordinator of MIS
Department of Computer Science and Engineering
Faculty of Science & Information Technology
Daffodil International University

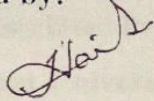**Dr. Mohammad Shorif Uddin**   External Examiner
Professor
Department of Computer Science and Engineering
Jahangirnagar University

DECLARATION

I hereby declare that, this project has been done by me under the supervision of **Dr. Sheak Rashed Haider Noori, Associate Professor & Associate Head, Department of CSE, FSIT, Daffodil International University**. I also declare that neither this project nor any part of this project has been submitted elsewhere for award of any degree or diploma.

Supervised by:

_____

Dr. Sheak Rashed Haider Noori
Associate Professor & Associate Head
Department of CSE, FSIT
Daffodil International University

Submitted by

_____

Md. Shajedul Haque Rana
ID: 142-25-403
Department of Computer Science & Engineering
Daffodil International University

ACKNOWLEDGMENTS

ABSTRACT

This is an advancement of ticker system. Existing system does not preserve some criterion for existing system such as Smart Input & Update System, User Login System, Archive System, On-Air Log System, Report System, User Privilege System etc. This system able to check the status of Data Link Server and Database Connectivity. The system has three user modes separating on privileges. The User mode can only input, delete and update ticker and archive the ticker. The Power User mode can input, delete and update the ticker, archive the ticker and approved the ticker. The Admin user mode can input, delete, update the ticker, also can delete the archived ticker, see the on-air log, generate the report and create the new user. Black-box testing is done to check functionality of the system. The analysis, design and testing are document

TABLE OF CONTENTS

CONTENTS   **PAGE**

CHAPTER-4: SYSTEM DESIGN

CHAPTER-5: DEVELOPMENT & TESTING

CHAPTER-6: CRITICAL APPRAISAL

CHAPTER-7: CONCLUSION

REFERENCES

LIST OF TABLES

LIST OF FIGURES

CHAPTER ONE

INTRODUCTION

1.1 Introduction

This project will describe the "Design and Development of a Television Ticker System" by providing a detailed documentation. This documentation will address the different techniques and tools that are used to carry out an in depth analysis of this project.

1.2 Methodology to be used

Design methodology is chosen because it provides efficient development environment integrating with the Unified Modeling Language. The Unified Modeling Language provides standard graphical representation which is used to visualize, specify, construct and document the artifacts of the proposed project [1].

The topics that need to be covered in this project are as follows:

- Brief introduction of "Television Ticker System"
- Overall concept of the project, scope and aims of the project
- Analyzing the current system
- Development of program using VB.Net & Microsoft Access 2013
- Data validation testing
- Implementation of system and infrastructure setup
- Conclusion of the project

1.3 Basic Features of "Television Ticker System"

This is an advancement of an existing system for Television Ticker System. Existing system does not preserve some criterion for Television Ticker system such as Smart Input & Update System, User Login System, Archive System, On-Air Log System, User Privilege System etc. This system able to generate the log report.

1.4 Conclusion

The language of the "Television Ticker System" that we developed through VB.Net 2010 and Microsoft Access 2013. The feature of the system can be changed according to my future thinking. It can add some more features or remove some features on the system.

CHAPTER TWO

INVESTIGATION OF CURRENT SYSTEM

2.1 Introduction

Investigation phase is carried out to provide a detailed description of the current system. The current system will help to visualize the working procedure is maintained at present and necessary features that the current system is depriving [2].

2.2 Description of the Current System

The details of current system are given below

Input, Update & Delete System of Current System

This is the ticker source excel file and it is connected to DataLink Server. Just open the excel file and type news and save. After save it will go to on-air. Same process for the update news. Also you should always check DataLink server is running or not. If DataLink server is not running then random and wrong data will go to on-air.
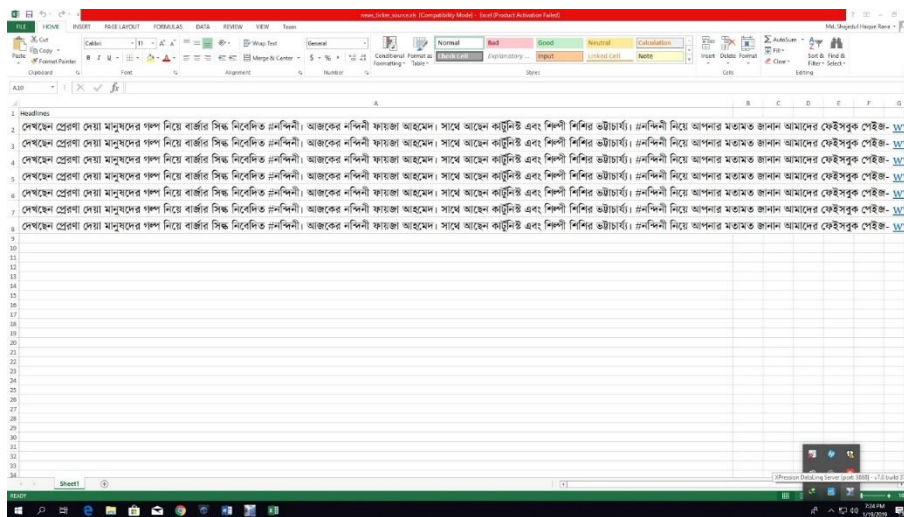
Figure-1: Current System of Ticker
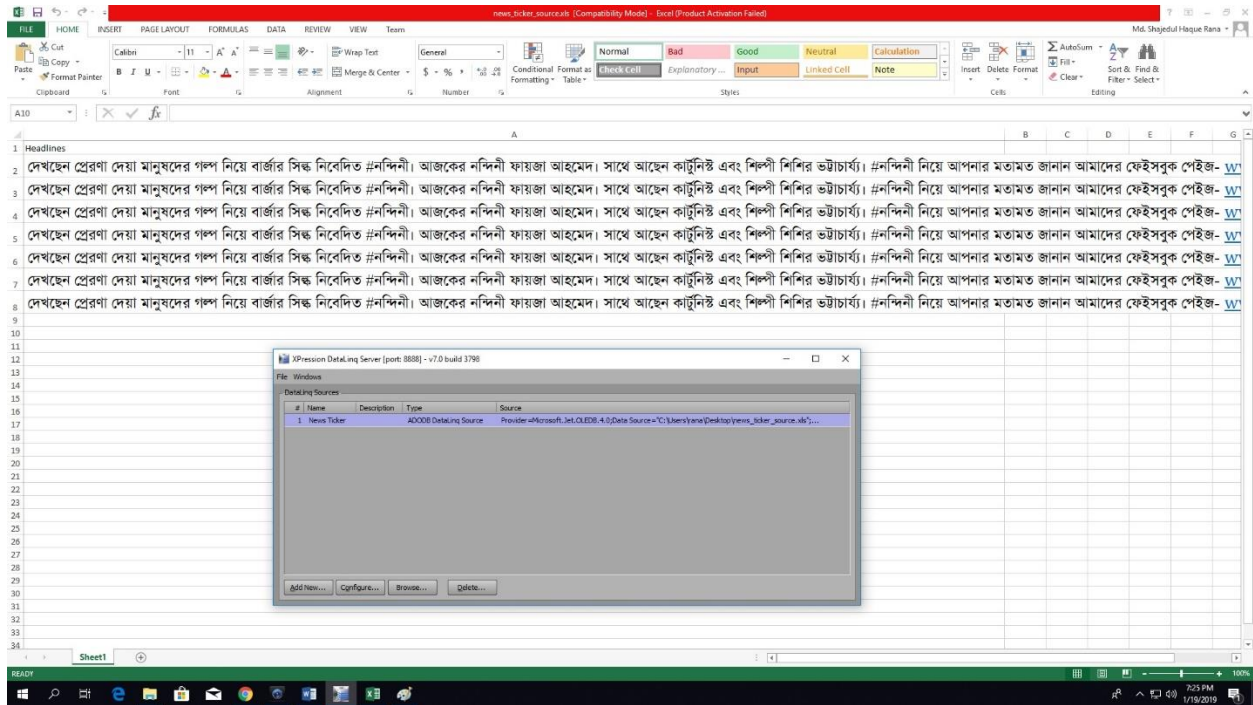
Figure-2: Current System with DataLink Server of Ticker

2.3 Initial Problems

- No smart Input & Update System
- No delete system
- No user login system
- No archive system
- No approval system
- No on-air log system
- No on-air log report system
- No user privilege system etc.

2.4 Brief Description of Initial Requirements

- A well-defined and secured database will be made where all the information will be kept for further processing. This way is the storing and finding any kind of information at any time will be easy.

- There will be easier manipulation as any kind of calculation that needs to be done will be automated to avoid any kind of incorrect or duplicate value to be stored in the database.

- The advance software system will enter through login interface with their respective User ID and Password.

2.5 Conclusion

The investigation stage is completed, I have completed our investigation in our current system and find out some problem and limitation.

CHAPTER THREE

STUDY OF FEASIBILITY

3.1 Introduction

Feasibility study is a cost effective solution in regarding the requirements that the TV station expect from the advance system. [3]

3.2 Problem in Details of Current System

The details about of problem in current system are given below.

3.2.1 General Problems

The general problems are given below.

- No smart input, delete and update system.
- No user login system.
- No input and update log system.
- No approval system
- No archive system.
- No on-air log system.
- No user privilege system.
- No log report system.

3.2.2 Operational Level Problems

The operational level problems are no Smart Input & Update System, User Login System, Archive System, On-Air Log System, User Privilege System etc. So user can't handle it properly and some time they are not understand the operation of the current system. That's the reason sometimes ticker goes wrong information.

3.3 Benefits of the Advance Software System

The details about of benefits of the advance software system are given below.

3.3.1 General Benefits

The general benefits of the advance software system are Smart Input & Update System, User Login System, Archive System, On-Air Log System, Report System, User Privilege System etc. This system able to check the status of Data Link Server and Database Connectivity. The system has three user modes separating on privileges. The User mode can only input, delete and update ticker system and archive the ticker. The Admin user mode can input, delete, update the ticker, also can delete the archived ticker, see the on-air log, generate the report and create the new user.

3.3.2 Operational Level Benefits

It's include the Smart Input & Update System, User Login System, Archive System, On-Air Log System, User Privilege System etc. So user can easily handle it and understand the operation. So will not go wrong information in the ticker. Also they can frequently use same data for ticker from archive. If any user do the wrong then it will be easier to find out the user who did it through log.

3.3.3 Special Purpose

Our advance software system has special purpose system. It has three modes. There are Admin, User and Power User mode.

The User mode can only input, delete and update ticker system and archive the ticker.

The Admin user mode can input, delete, update the ticker, also can delete the archived ticker, see the on-air log, generate the report and create the new user.

3.4 Feasibility Factors

A feasibility study is an evaluation of a proposal designed to determine the difficulty in carrying out a designated task. Generally a feasibility study precedes technical development and project implementation. In other words, a feasibility study is an evaluation or analysis of the potential impact of a proposed project.

Definition of Feasibility Studies: A feasibility study looks at the viability of an idea with an emphasis on identifying potential problems and attempts to answer one main question: Will the idea work and should you proceed with it? [4]

3.4.1 Technical Feasibility

The computer technology is quite familiar to the environment of the tv media. But the users of the advance software system are not quite well known about database and they need some technical help from technical experts. However, the users of the advance software system will be able to maintain the centralized database from their different computer terminal ends [5].

3.4.2 Operational Feasibility

The users can give only input through the forms, it will be easy to learn and easy to handle.

CHAPTER FOUR

SYSTEM DESIGN

4.1 Introduction

This is the phase where the advance software system will be defined and their functionality. Hence, the above analytical phase will now be converted to a database structure to provide an advance software system the functionality to deliver data from a centralized database [6].
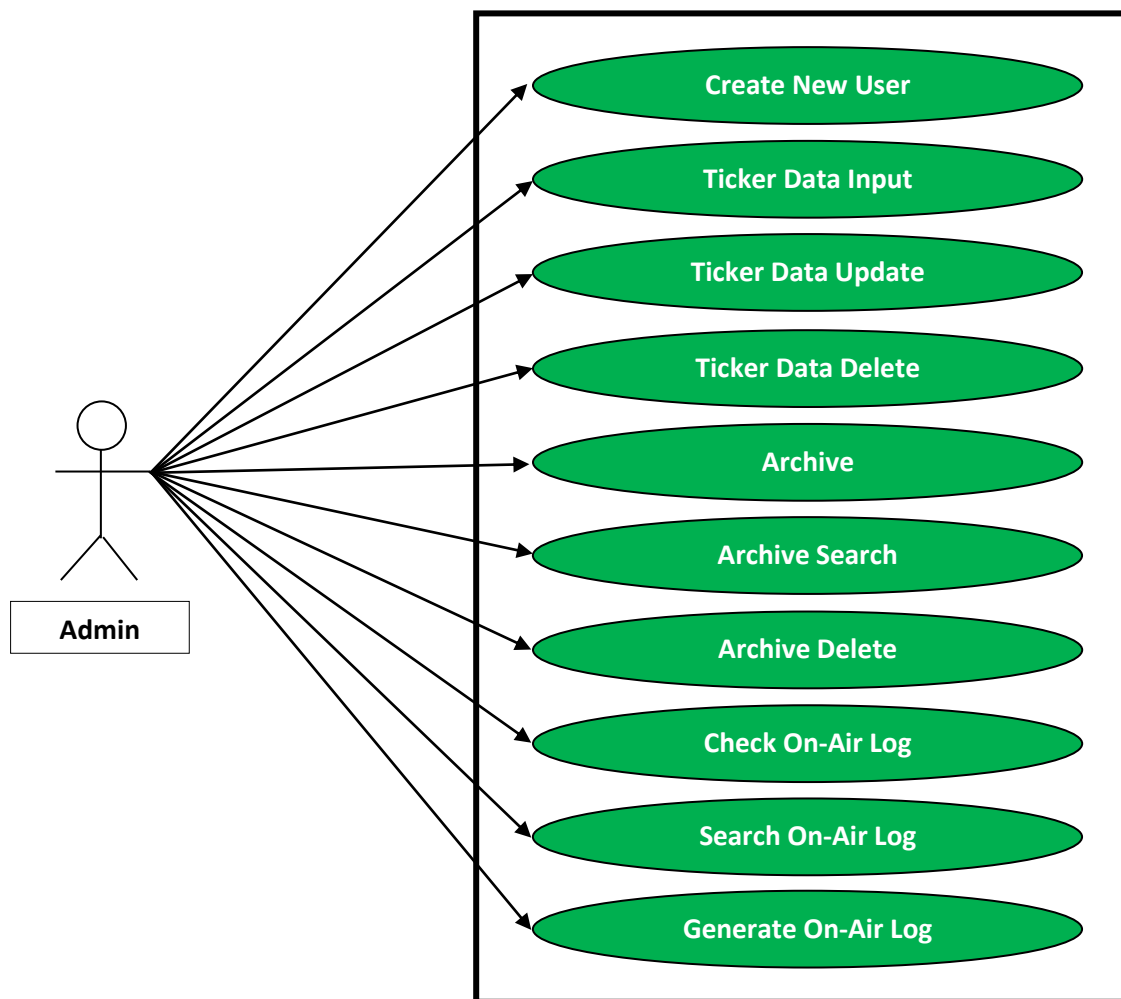
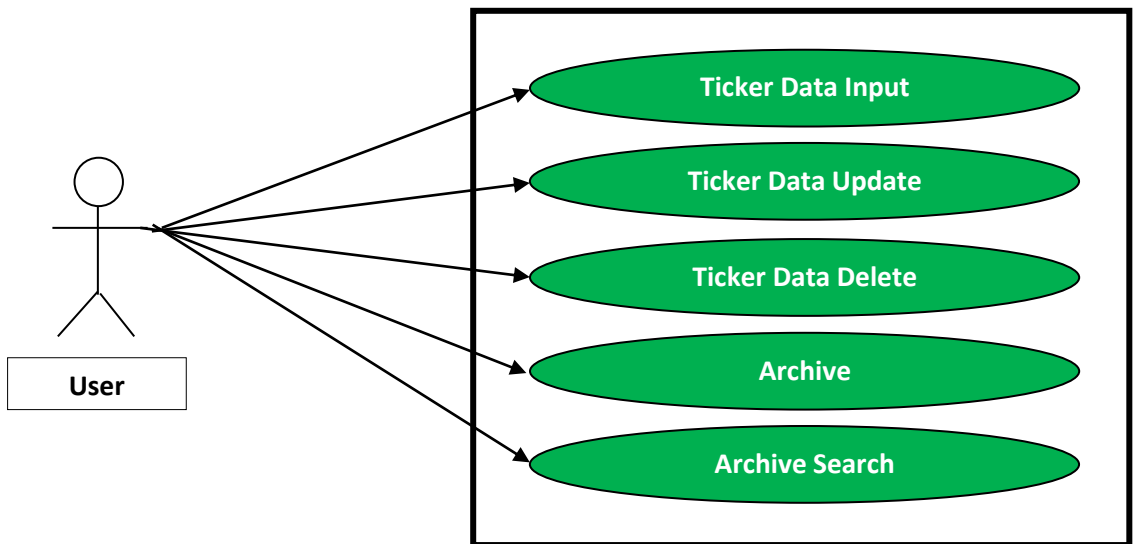## 4.2 Use Case Diagram

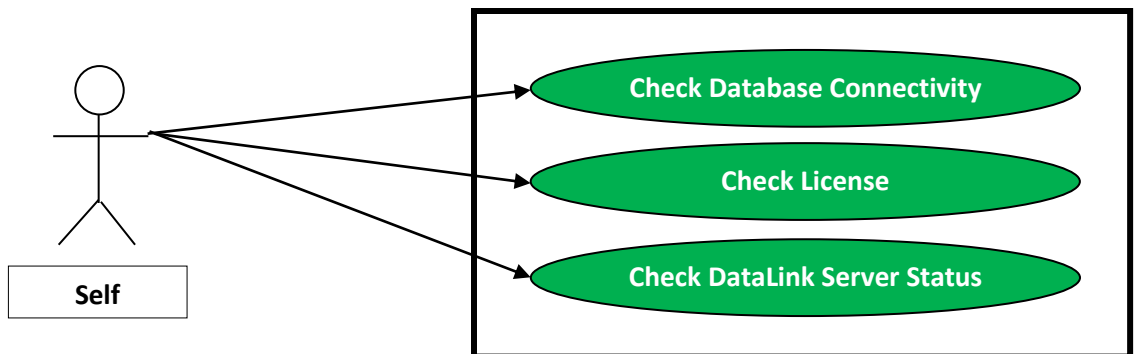**Figure-3: Use Case of Admin**

Figure-4: Use Case of User

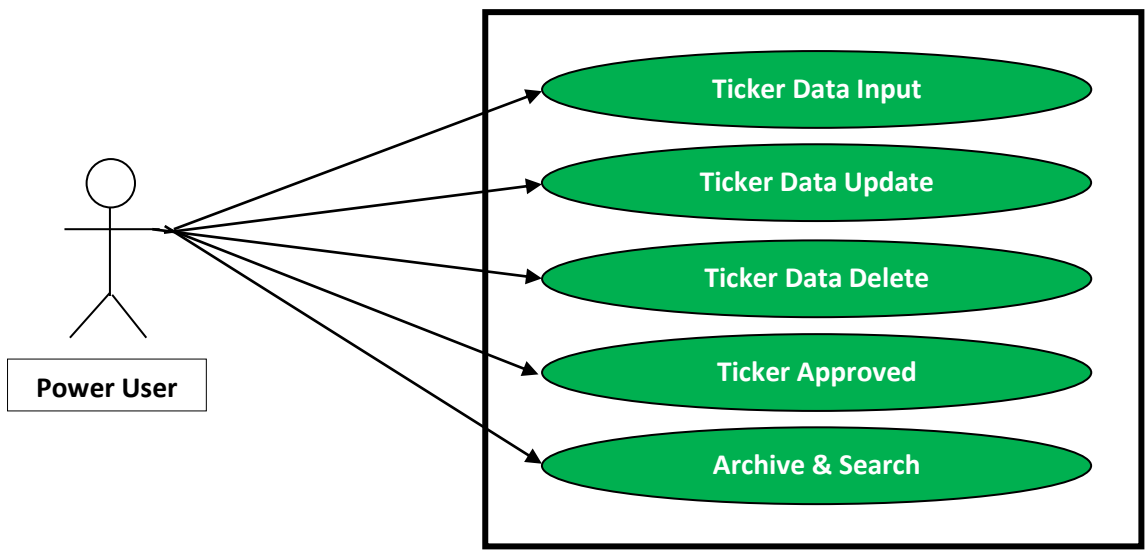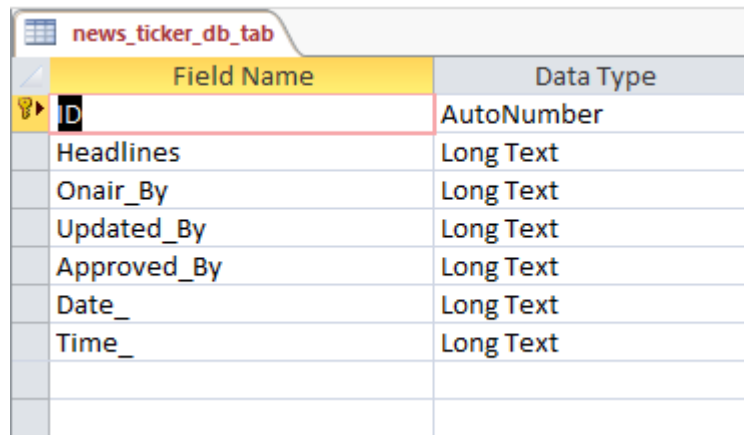**Figure-5: Use Case of Self**

Figure-6: Use Case of Power User

4.3 Database Design

Database design is the process of producing a detailed data model of a database. This logical data model contains all the needed logical and physical design choices and physical storage parameters needed to generate a design in a Data Definition Language, which can then be used to create a database. A fully attributed data model contains detailed attributes for each entity [7].

4.3.1 Table: News Ticker DB Tab
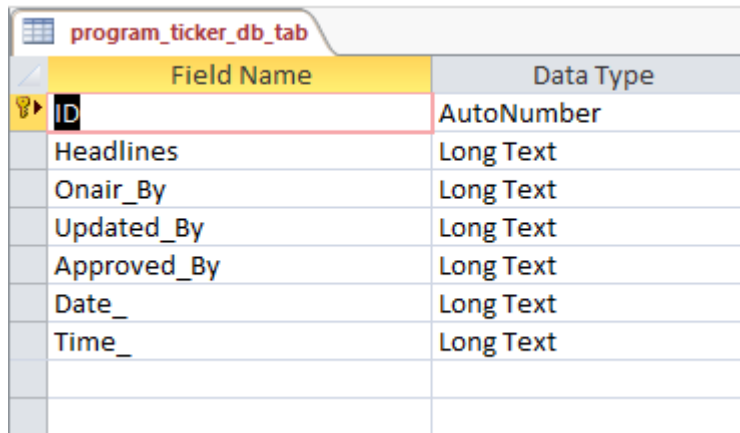
news_ticker_db_tab	
Field Name	**Data Type**
ID	AutoNumber
Headlines	Long Text
Onair_By	Long Text
Updated_By	Long Text
Approved_By	Long Text
Date_	Long Text
Time_	Long Text

Figure-7: Database of News Ticker

Here, news_ticker_db_tab table has seven fields. They are ID, Headlines, Onair_By, Updated_By, Approved_By, Date_, Time_ where ID is primary key.
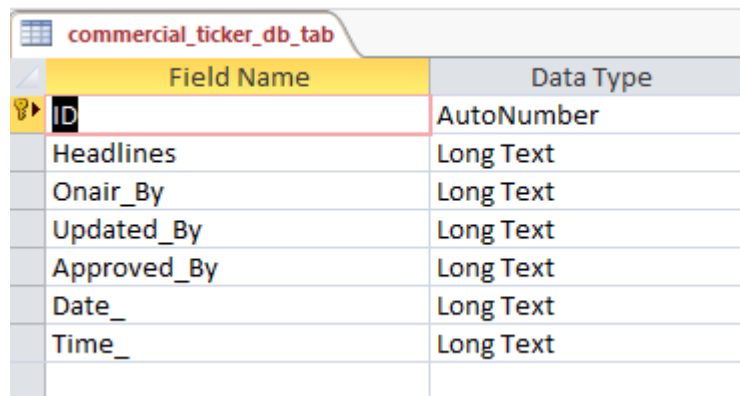
Table: Program Ticker DB Tab

Figure-8: Database of Program Ticker

Here, program_ticker_db_tab table has seven fields. They are ID, Headlines, Onair_By, Updated_By, Approved_By, Date_, Time_ where ID is primary key.
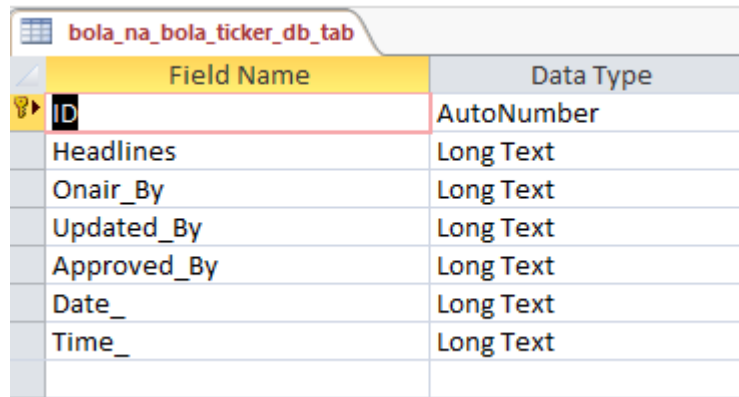
Table: Commercial Ticker DB Tab

Figure-9: Database of Commercial Ticker

Here, commercial_ticker_db_tab table has seven fields. They are ID, Headlines, Onair_By, Updated_By, Approved_By, Date_, Time_ where ID is primary key.

Table: Bola Na Bola Ticker DB Tab

Figure-10: Database of Bola Na Bola Ticker

Here, bola_na_bola_ticker_db_tab table has seven fields. They are ID, Headlines, Onair_By, Updated_By, Approved_By, Date_, Time_ where ID is primary key.

Table: Archive

Figure-11: Database of Archive

Here, archive table has six fields. They are ID, Headlines, Type, Archived_By, Date_, Time_ where ID is primary key.

Table: Onair Log

Figure-12: Database of Onair Log

Here, onair_log table has eight fields. They are ID, Headlines, Onair_By, Updated_By, Approved_By, Date_, Time_, Type where ID is primary key.

Table: Selected Onair Log Report

Figure-13: Database of Selected Onair Log Report

Here, selected_onair_log_report table has eight fields. They are ID, Headlines, Type, Onair_By, Updated_By, Approved_By, Date_, Time_ where ID is primary key.
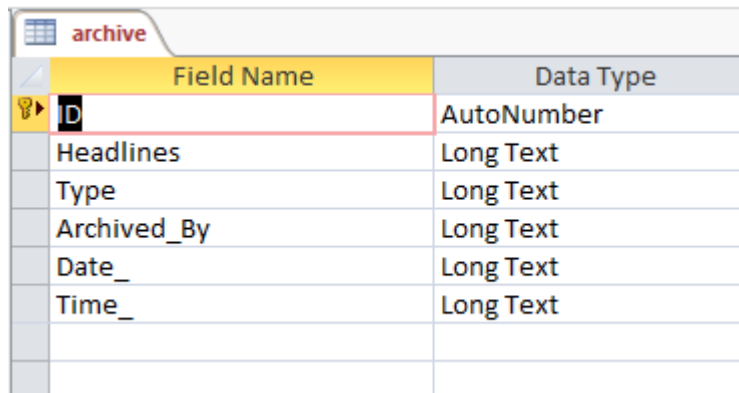
Table: Send Ticker DB Tab

Figure-14: Database of Send Ticker

Here, send_ticker_db_tab table has seven fields. They are ID, Headlines, Type, Send_By, Approved_By, Date_, Time_ where ID is primary key.

Table: Login Credential
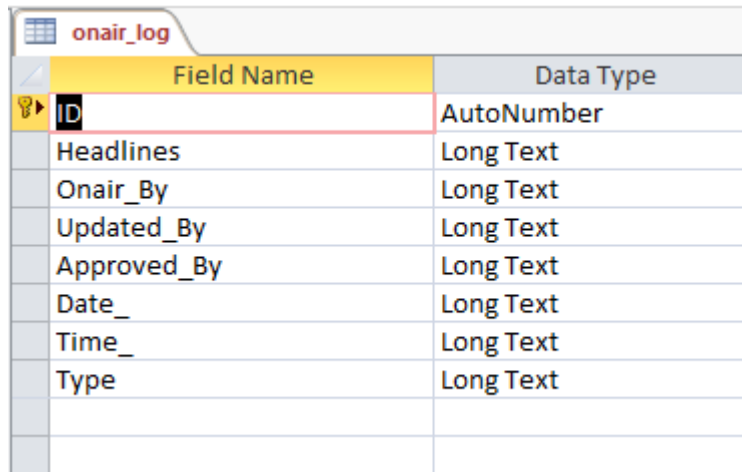

Figure-15: Database of Login Credential

Here, login_credential table has four fields. They are ID, User_ID, Pass, Type where ID is primary key.

4.4 Graphical User Interface (GUI) Design

1. Login Prompt
2. Ticker Handler,
3. Archive
4. Onair Log
5. Crystal Report
6. License Activator
7. About
8. Rundown Position
9. New User
10. Ticker Type Input

19
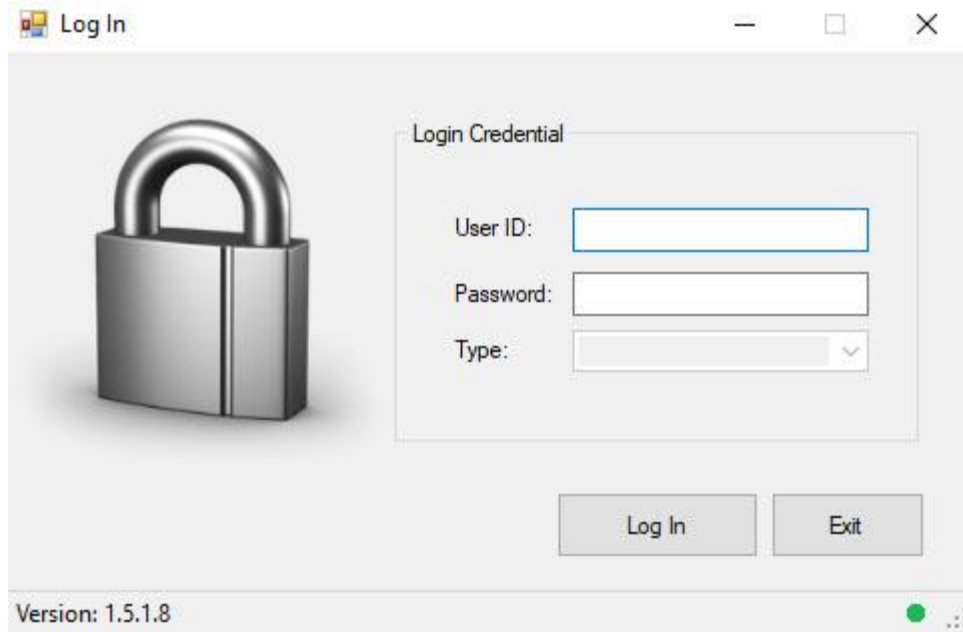
Figure-16: User Interface of Login Prompt

This is log in form of advance software system. This form name is "Log In". When we are open this software that time "Log In" form will be prompt. Then input the user name and type will be selected automatically then put the password and press "Log In" button. If user name and password will be matched with database then prompt the "Ticker Handler" window otherwise give message and say try again.

Ticker Handler Window:

This is "Ticker Handler" form of advance software system. This form name is "Ticker Handler" form. When input the user name and password of "Log In" form and click "Log In" then open the "Ticker Handler" form. "Ticker Handler" form contains by four menus, dashboard, lock, news type, onair rundown, ready for onair rundown, ticker text source and control.
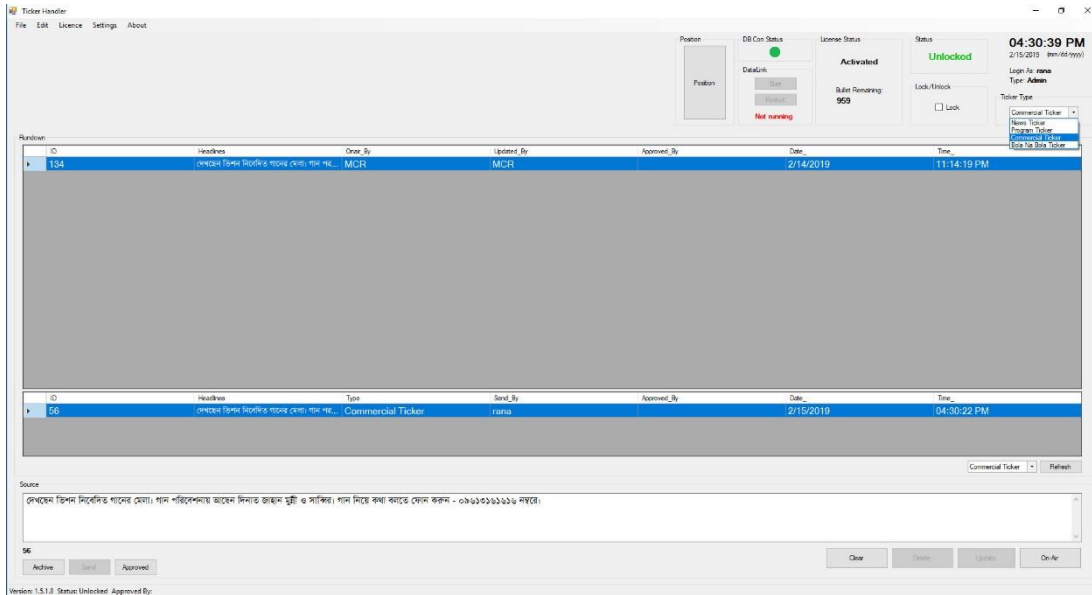
Figure-17: User Interface of Ticker Handler

Archive Window:

This is "Archive" form of advance software system. This form name is "Archive" form. "Archive" form contains by data grid view, delete button and three type search box. You can search the archive by headlines, ticker type or person. Also you can delete data from archive window and can on-air selected data directly from archive.
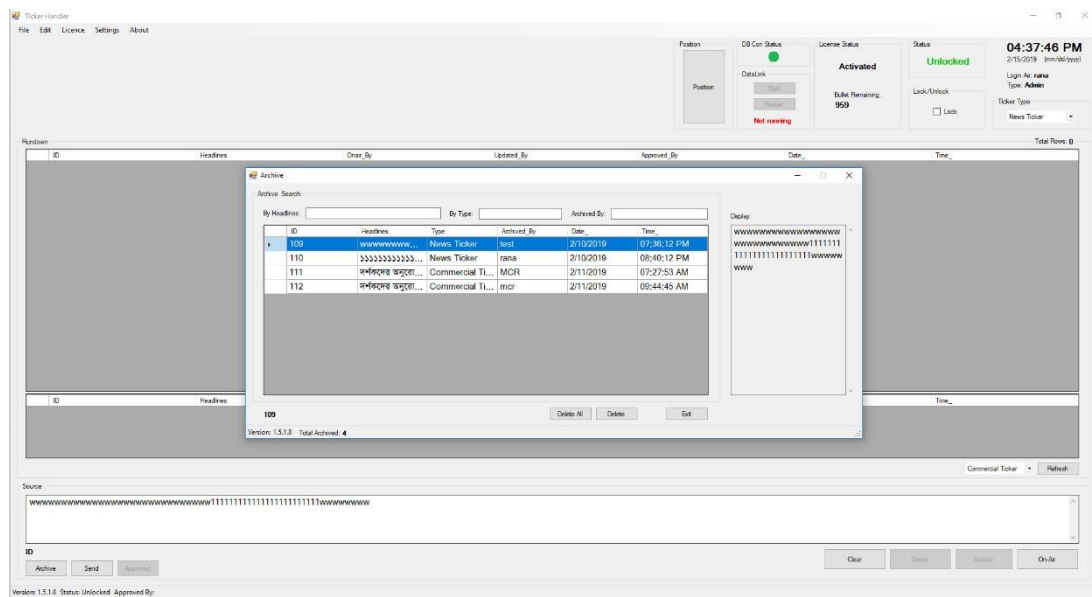
Figure-18: User Interface of Archive

On-Air Log Window:

This is "On-Air Log" form of advance software system. This form name is "On-Air Log" form. "On-Air Log" form contains by data grid view, report generate button and two type search box. You can search the report by date and type of ticker. Also generate the report for all data or selected data.
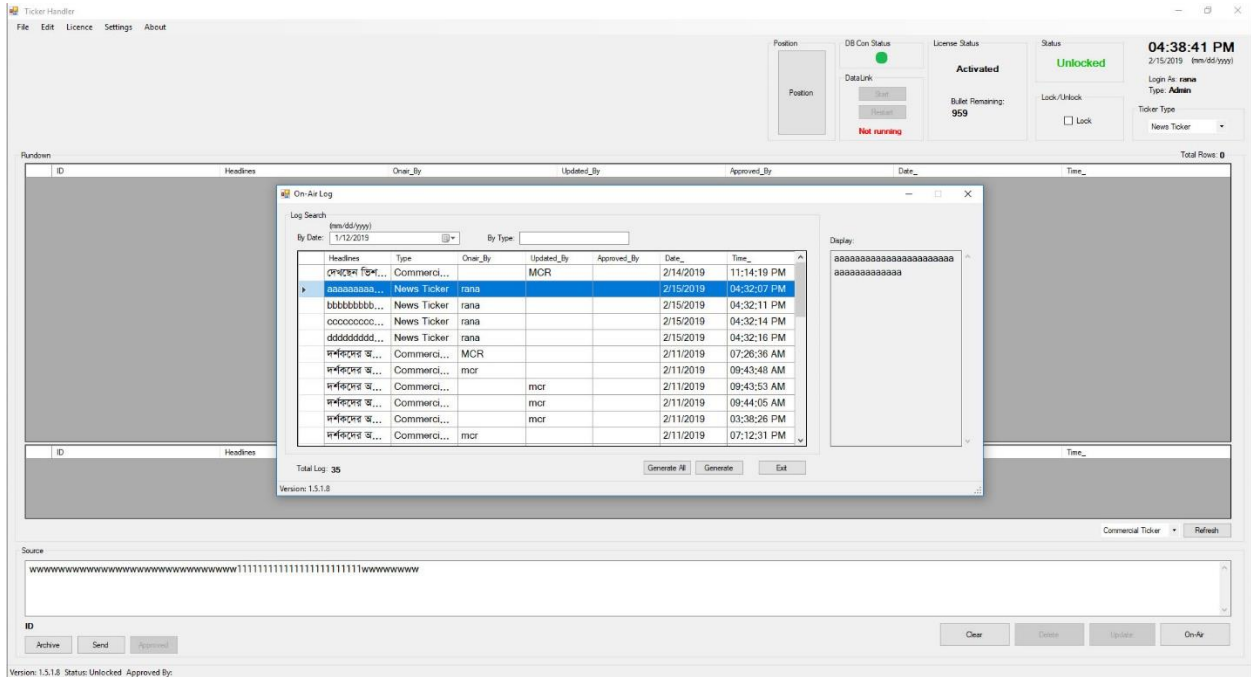
Figure-19: User Interface of On-Air Log

Crystal Report Viewer Window:

This is "Crystal Report Viewer Window" form of advance software system. This form name is "On-Air Log Report" form. "On-Air Log Report" form contains by varieties of data like Type, On Air By, Updated By, Approved By, Date, Time, Headlines etc. After click the "Generate All" button from "On-Air Log" window then open "On-Air Log Report" window.
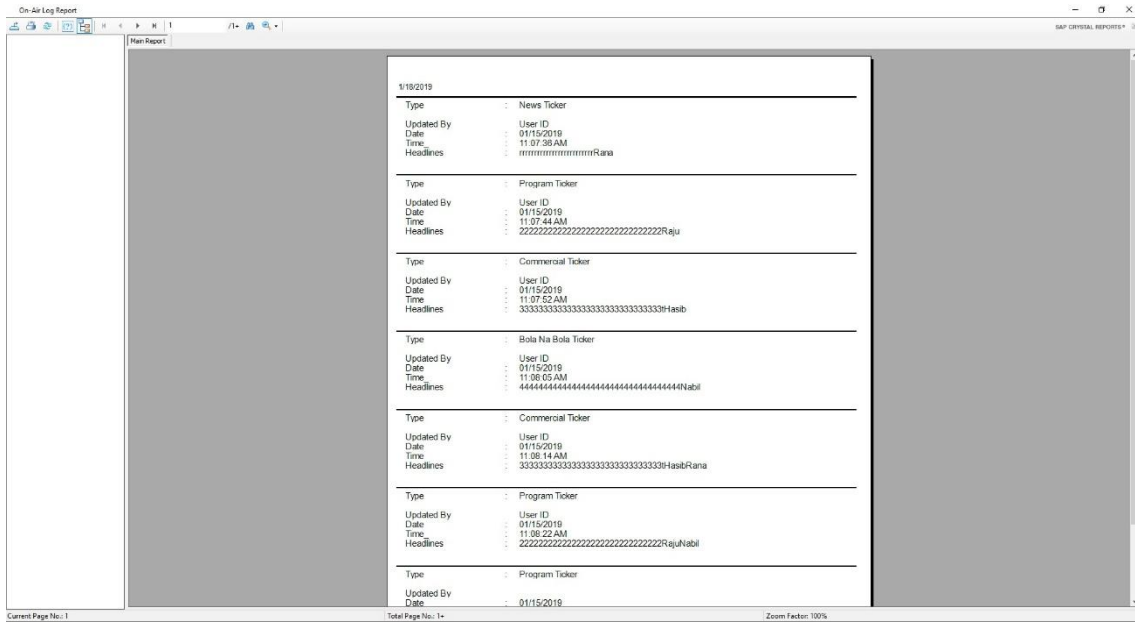
Figure-20: User Interface of Crystal Report

License Activator Window:

This is "License Activator" form of advance software system. This form name is "License Activator" form. "License Activator" form contains by two textbox and two buttons. For the license of the software you should put the pin number first then enable the bullet text box and put the bullet then press the "Update" button and you will get license.
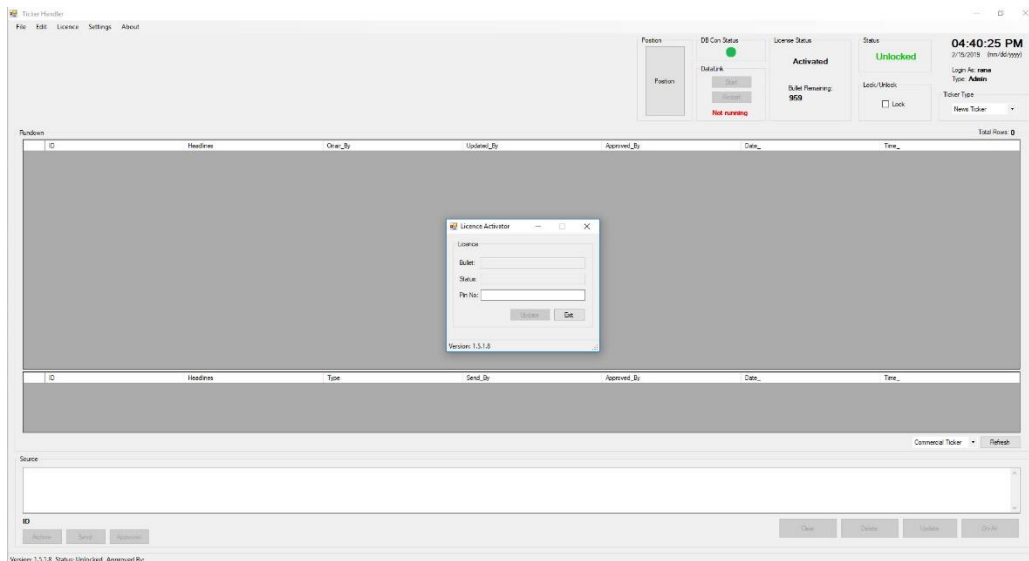
Figure-21: User Interface of License Activator

About Window:

This is "About" form of advance software system. This form name is "About" form. "About" form contains by few text and one button where you can know about the developer and close the about window.
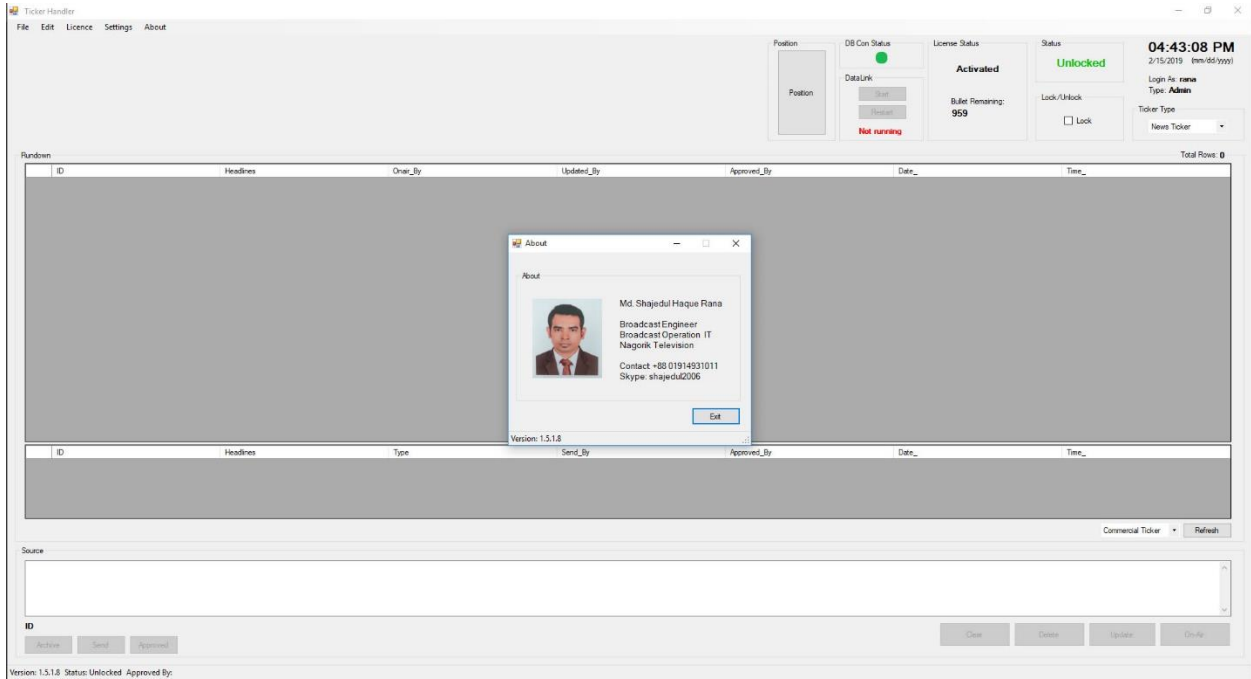
Figure-22: User Interface of About

Rundown Sequence Update Window

This is "Rundown Sequence Update Window" form of advance software system. This form name is "Rundown Sequence Update" form. "Rundown Sequence Update" form contains by datagridview and few buttons where you can see the current rundown sequence and change the current rundown sequence and close the rundown sequence update window.
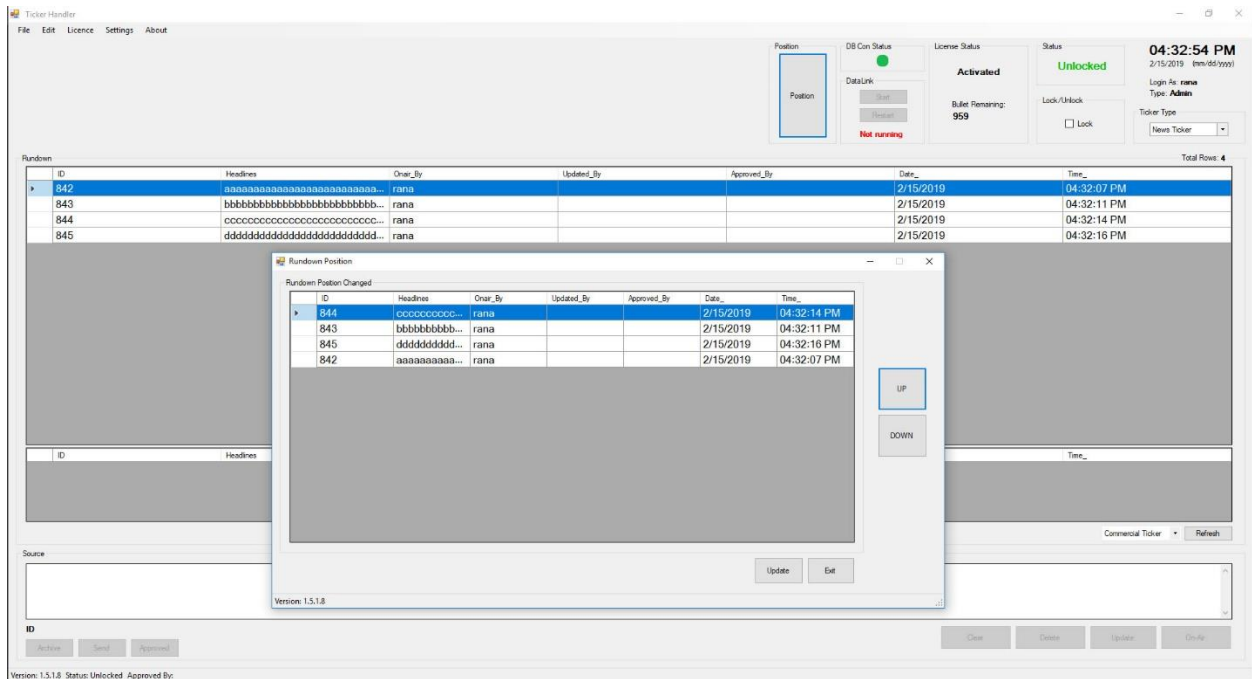
Figure-23: User Interface of Rundown Position

New User Window

This is "New User Window" form of advance software system. This form name is "New User" form. "New User" form contains by few textbox, few buttons and datagridview where you can see the created user and their other information and create, update and delete new user and close the new user window.
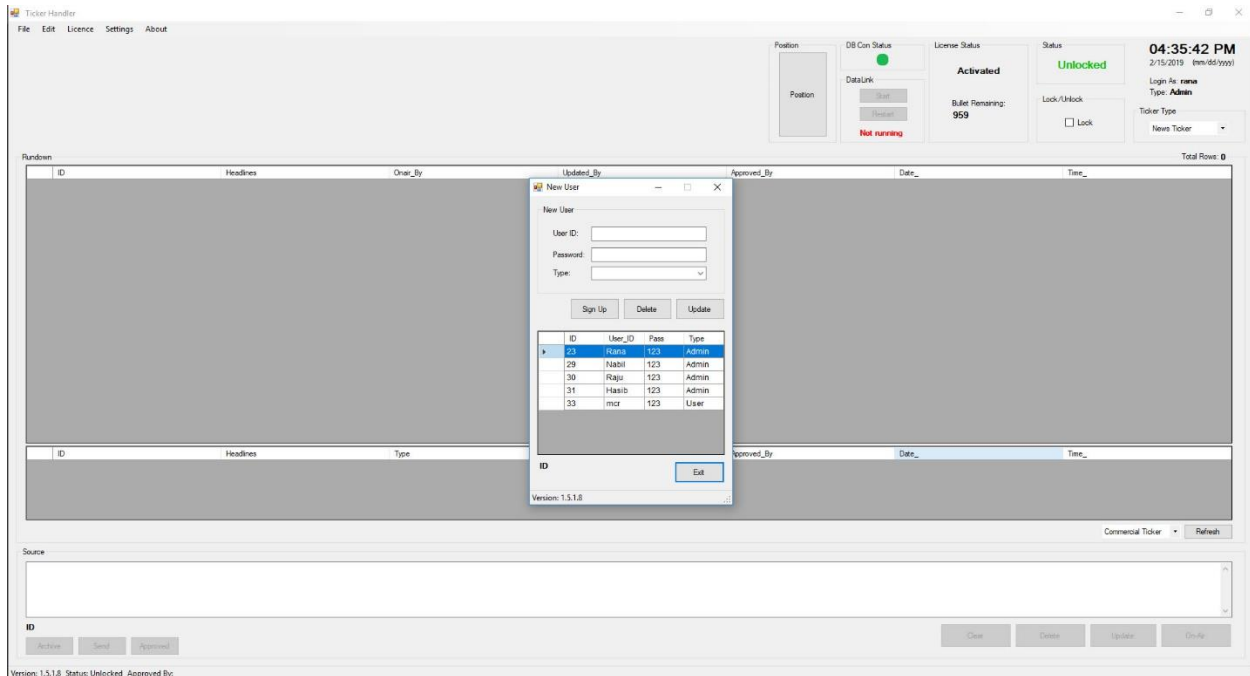
Figure-24: User Interface of New User

4.5 Conclusion

The design is completed, so the designs can now be converted to physical design to make it workable and operational according to the specification.

CHAPTER FIVE

DEVELOPMENT & TESTING

5.1 Introduction

Software development is the development of a software product in a planned and structured process. This software could be produced for a variety of purpose – the three most common purpose are to meet specific needs of a specific client/business, to meet a perceived need of some set of potential users, or for personal use [8].

Testing focuses on the most important aspect of a module: how well the module meets its specification. [9].

5.2 Testing of Developed System

Figure-25: Log In Prompt of Advance Software System

Figure-26: Ticker Handler Window of Advance Software System

Figure-27: Archive Window of Advance Software System

Figure-28: On-Air Log Window of Advance Software System

Figure-29: On-Air Log Report Window of Advance Software System

Figure-30: License Activator Window of Advance Software System

Figure-31: About Window of Advance Software System
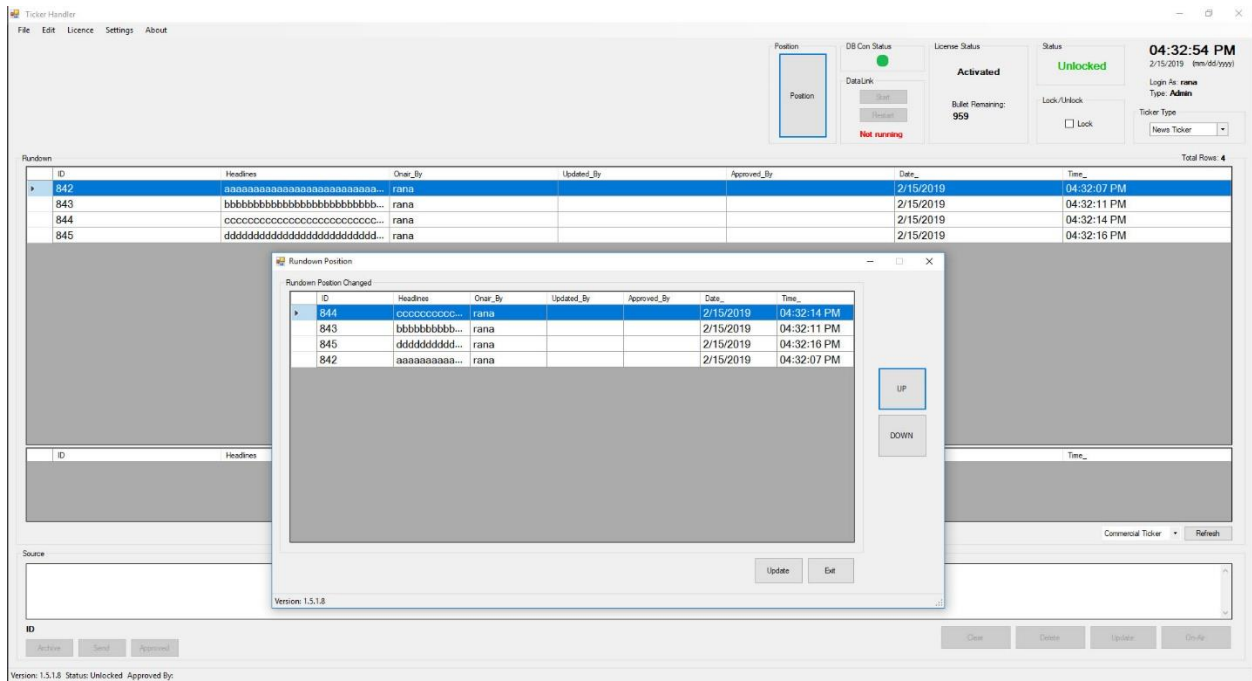
Figure-32: Rundown Position Window of Advance Software System
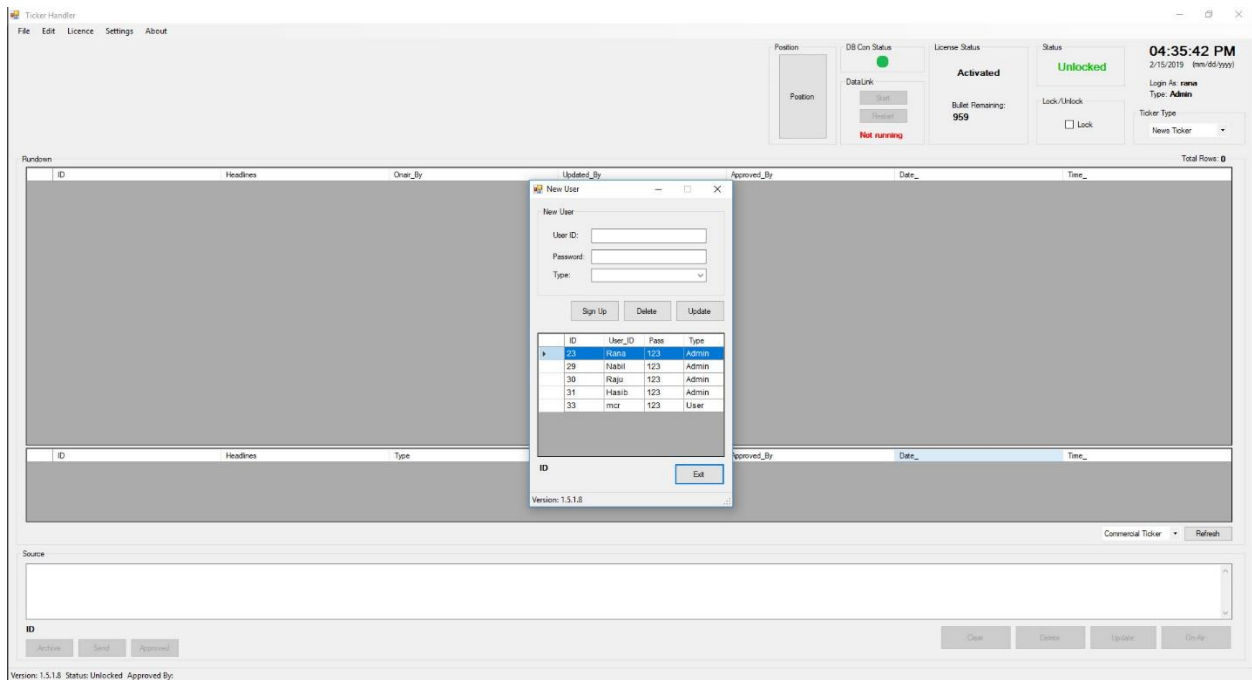
Figure-33: New User Window of Advance Software System

5.3 Conclusion

The development stage is completed, we are already checked our advance software system and we saw that it worked properly.
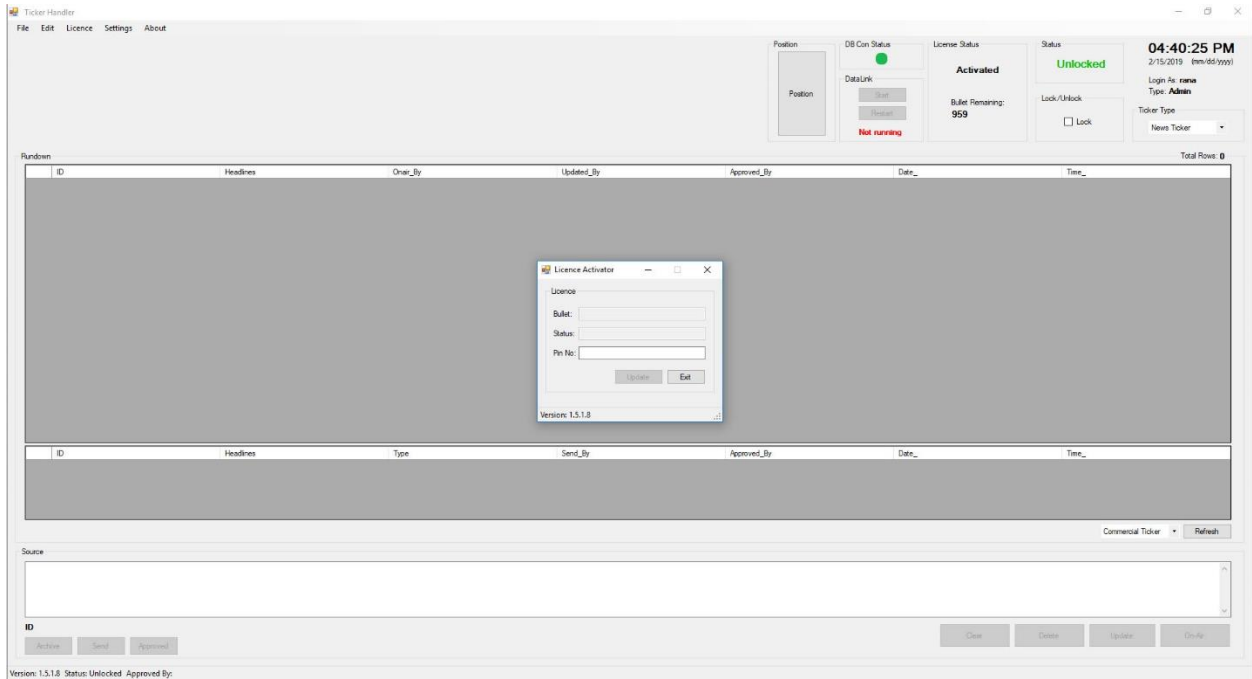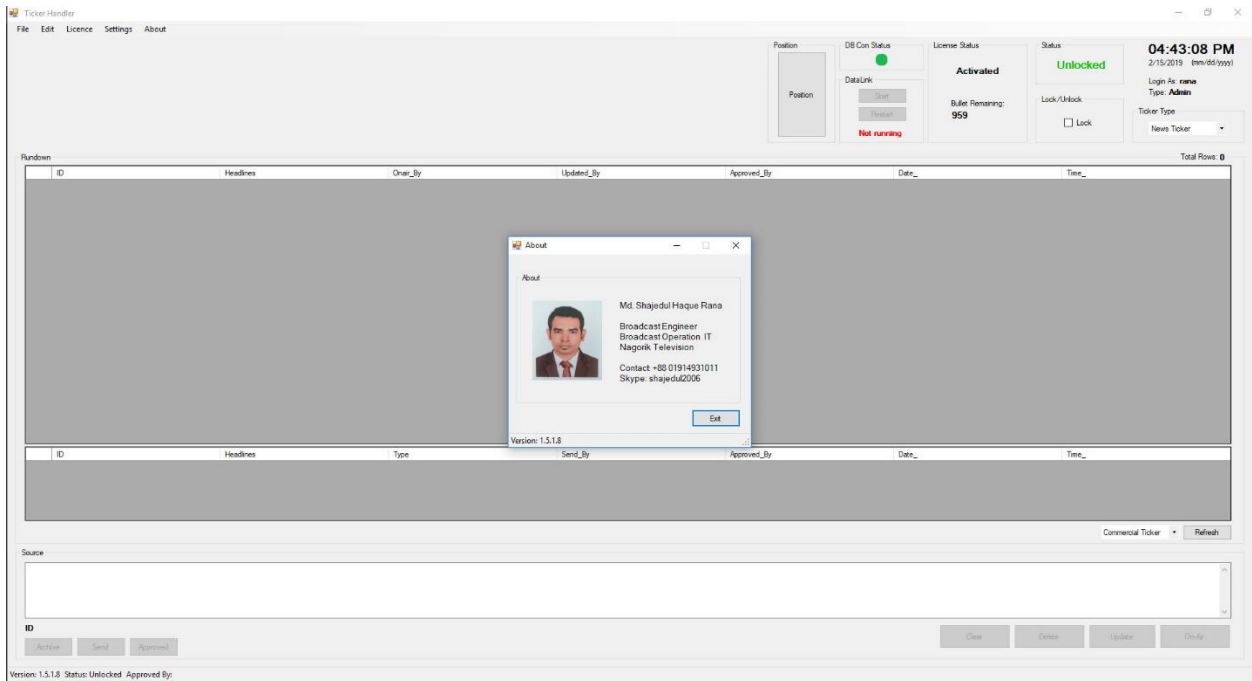
CHAPTER SIX

CRITICAL APPRAISAL

6.1 Introduction

The critical appraisal justifies what requirements are achieved from the advance software system. As a matter of fact, it also describes what future requirements could have been thought to make it more dynamic and more reliable, accurate and flexible.

6.2 Further Improvements

This could have been a client server architecture can be developed so multiple level users be supported with concurrent transactions.

6.3 Limitation

The limitation about of advance software system are given below.

1. Advance software system is not an online based system.

6.4 Learning from the Project

The project has given to me the idea to expand my knowledge into future thinking in order to develop any new or advance software system. The project will not grow as time passes by, so future development should be considered. I have to take the right choice by forecasting the future improvement.

6.5 Conclusion

The critical appraisal describes the best things that one can possibly include in the project and the things that would have been better if included in the project to make it more reliable and accurate.

CHAPTER SEVEN

CONCLUSION

7.1 Conclusion

The design and development of a television ticker system provides an expansion to the new idea that the ticker input and its related details can also be compressed into a centralized database from where these info can be retrieved to make further management decisions.

References

[1]. Md Shajedul Haque Rana, Md Shamim Hossain, "Design & Development of a Course Registration System Using the Pre-Requisite Checking Constraint", Undergraduate Project Report of CSE Department, Daffodil International University, November 2010

[2]. Md Shajedul Haque Rana, Md Shamim Hossain, "Design & Development of a Course Registration System Using the Pre-Requisite Checking Constraint", Undergraduate Project Report of CSE Department, Daffodil International University, November 2010

[3]. Md Shajedul Haque Rana, Md Shamim Hossain, "Design & Development of a Course Registration System Using the Pre-Requisite Checking Constraint", Undergraduate Project Report of CSE Department, Daffodil International University, November 2010

[4]. Feasibility Study, Feasibility study – Wikipedia, retrieved 20th January 2019, http://en.wikipedia.org/wiki/Feasibility_study

[5]. Md Shajedul Haque Rana, Md Shamim Hossain, "Design & Development of a Course Registration System Using the Pre-Requisite Checking Constraint", Undergraduate Project Report of CSE Department, Daffodil International University, November 2010

[6]. Md Shajedul Haque Rana, Md Shamim Hossain, "Design & Development of a Course Registration System Using the Pre-Requisite Checking Constraint", Undergraduate Project Report of CSE Department, Daffodil International University, November 2010

[7]. Database Design, Database design – Wikipedia, retrieved 20th January 2019, http://en.wikipedia.org/wiki/Database_design

[8]. Software Development, Software Development – Wikipedia, retrieved 24th January 2019, http://en.wikipedia.org/wiki/Software_development

[9]. Md Shajedul Haque Rana, Md Shamim Hossain, "Design & Development of a Course Registration System Using the Pre-Requisite Checking Constraint", Undergraduate Project Report of CSE Department, Daffodil International University, November 2010

Turnitin Originality Report

Processed on: 21-Apr-2019 13:39 +06
ID: 1116189923
Word Count: 3538
Submitted: 1

Similarity Index	**Similarity by Source**	
24%	Internet Sources:	8%
	Publications:	0%
	Student Papers:	24%

DESIGN AND DEVELOPMENT OF A TELEVISION TICKER SYSTEM By Md. Shajedul Haque Rana

9% match (student papers from 20-Dec-2010)
Submitted to University of Greenwich on 2010-12-20

4% match (student papers from 16-Dec-2011)
Submitted to University of Greenwich on 2011-12-16

3% match (Internet from 23-Nov-2010)
http://en.wikipedia.org/wiki/Feasibility_study

2% match (student papers from 25-Apr-2013)
Submitted to Aston University on 2013-04-25

2% match (Internet from 28-Feb-2015)
http://www.covantsol.com/covantsol/

1% match (student papers from 28-Mar-2018)
Submitted to Daffodil International University on 2018-03-28

1% match (student papers from 07-May-2010)
Submitted to Institute of Technology, Tralee on 2010-05-07

1% match (student papers from 07-Apr-2018)
Submitted to Daffodil International University on 2018-04-07

1% match (student papers from 30-Nov-2012)
Submitted to Atilim University on 2012-11-30

1% match (student papers from 01-Jun-2010)
Submitted to University of Greenwich on 2010-06-01

< 1% match (Internet from 21-Mar-2019)
https://es.scribd.com/document/336852977/M-C-a-Sem-I-Paper-II-System-Ananalysis-and-Design

< 1% match (Internet from 18-Jun-2014)
http://www.nou.edu.ng/NOUN_OCL/pdf/SMS/ACC%20301.pdf

< 1% match (student papers from 31-May-2012)
Submitted to University of Greenwich on 2012-05-31