VISVESVARAYA TECHNOLOGICAL UNIVERSITY

JNANA SANGAMA, BELAGAVI – 590 018

A Mini Project Report
on

ONLINE APPS DISTRIBUTION PLATFORM

Submitted in partial fulfillment of the requirements as a part of the DBMS Lab for the award of degree of

Bachelor of Engineering
In
Information Science and Engineering

Submitted by

Ashish Kumar
1RN16IS019

Akshat Saxena
1RN16IS012

Lab Incharge
R. Raj Kumar
Asst. Professor
Dept. of ISE, RNSIT

Faculty Incharge
Prof. T S Bhagavath Singh
Associate Professor
Dept. of ISE, RNSIT

Department of Information Science and Engineering
RNS Institute of Technology
Channasandra, Dr. Vishnuvardhan Road, RR Nagar Post,
Bengaluru – 560 098

2018 – 2019

RNS Institute of Technology

Channasandra, Dr.Vishnuvardhan Road, RR Nagar Post,
Bengaluru – 560 098

DEPARTMENT OF INFORMATION SCIENCE & ENGINEERING

CERTIFICATE

This is to certify that the Mini project report entitled ***APP DISTRIBUTION PLATFORM*** has been successfully completed by **ASHISH KUMAR** bearing USN **1RN16IS019**, and **AKSHAT SAXENA** bearing USN **1RN16IS012** presently V semester student of **RNS Institute of Technology** in partial fulfillment of the requirements as a part of the DBMS Laboratory for the award of the degree ***Bachelor of Engineering in Information Science and Engineering*** under **Visvesvaraya Technological University, Belagavi** during academic year 2018 – 2019. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The mini project report has been approved as it satisfies the academic requirements as a part of DBMS Laboratory for the said degree.

Mr. T S Bhagavath Singh Faculty Incharge	**Mr. R Rajkumar** Lab Incharge	**Dr. M V Sudhamani** Professor and HOD

External Viva

Name of the Examiners	**Signature with date**
1. _____	_____
2. _____	_____

ABSTRACT

Over the years we have seen a great boom in Mobile Phones and Computers and now we find ourselves surrounded by them. We use Mobile phones and Computers in various ways, some of them being office work, purchasing products online, booking tickets online, etc. These devices are widely used for entertainment purposes such as watching online videos, movies, social media, apps, etc. So, we provide an online platform where the developers of the application and the people who are interested can communicate. We allow developers to publish their application on our platform, and users may buy the relevant apps from the developers through our platform. We have used Database Management System to implement this idea. We used HTML and CSS for front-end and C# for back-end development.

DBMS provides an efficient way for storing data in tabular format. It provides simple yet efficient way to insert, update, delete or retrieve the data stored. C# is a software that interacts with DBMS for data transfers involved. HTML and CSS are used to present the data in a presentable way for the end user.

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ASHISH KUMAR **AKSHAT SAXENA**

USN: 1RN16IS019 **USN: 1RN16IS012**

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INTRODUCTION

1.1 Background

The Database Management System (DBMS) is software that enables the users to define, create, maintain and control the access to the database. It is a software that interact with the user's applications programs and its database. The DBMS have the ability to store, update and retrieve the data. This is the main function of the DBMS because the database can be used if there is any record is being stored into the database. The record need to be retrieve first, then it can be change by the database administrator as it will be the record has been updated. The DBMS will protect the structure of the data. One of the main feature of DBMS is that it provides the facility for multiple access simultaneously, i.e. it allows several users to use the database all at the same time. This feature is quite useful for banks and online e-commerce websites.

The whole database is divided into number of tables and they have relation among them. The diagram showing these tables and relations among them is called Entity-Relationships Diagram (E-R Diagram). Based on this E-R Diagram the schema diagram is prepared which is the basic architecture of the database. According to the architecture or model of the database the tables, their attributes and relations among the tables are created using SQL.

Structured Query Language, also known as SQL, is utilized to interact with a database. Per ANSI (American National Standards Institute), it is the standard language for relational database management systems. SQL statements are utilized to perform tasks, for example, upgrade information on a database, or recover information from a database. "Some common relational database management systems that use SQL are: Oracle, Sybase, Microsoft SQL Server, Access, Ingres, etc. Although most database systems use SQL, most of them also have their own additional proprietary extensions that are usually only used on their system. However, the standard SQL commands such as "Select", "Insert", "Update",

"Delete", "Create", and "Drop" can be used to accomplish almost everything that one needs to do. Microsoft SQL is the SQL used in this project.

C# is a type-safe and sophisticated object-oriented language that allows designers to construct a range of protected and robust applications that work on the .NET Framework. It can be used to develop Windows customer applications, XML Web services, dispersed parts, client-server applications, database applications, etc. In this project we have used C# as back-end software that interacts with the database through Microsoft SQL.

HTML (Hypertext Markup Language) and CSS (Cascading Style Sheet) are the languages used display the data in a presentable manner as a web page in the browser. In this project we have used HTML and CSS for front-end development that displays the data retrieved from the database via SQL.

1.2 Introduction to the title of the project

Application have always been there in the modern era and now in the technically advanced society the apps are also evolving at a rapid pace. They can be used in mobile phones which have become an artificial extension of the people of themselves. Applications are used everywhere and for varied purposes such as music, apps, work related application. So, this project provides a platform for people to search for the relevant applications.

This project contains three major parts. Developer, it is the developer who has developed the app and publishes it on the platform. User, it is the one who buys the application from the developers.

Developer is the group of people or individual that develops the applications and publishes his apps on this platform for others to buy. Once registered developer can login to their account to view and manage the apps that they have published. They publish a new app or delete an existing app.

User is the person that uses the apps that are published on the platform. User buys the apps from the developer via this platform. User registers himself through the

registration page for users. Once registered he can login to this account and search for the apps he wants to buy. When he makes a purchase, the apps are included in his library. Once an app is purchased, it remains in his library forever. He need not purchase the app if the app is updated. The purchase system is secure as it asks the user to re-enter the password before the purchase. When new updates of the app are pushed the developer need not produce hard copy of the update, thus saving the expense of the developer as well as the user.

Last couple of years have seen a great increase in the mobile industry. Each day a new mobile phone comes in the market and with this there comes an increased demand for the new application which are basically the heart of any mobile phone. Users across the globe use these apps for multiple purposes such as for playing games, a social media app, an app which makes the photo better, a better video player and miscellaneous purposes. So, with that idea in our mind we have built a friendly and easy to browse website.

Chapter 2

ER DIAGRAM AND RELATIONAL SCHEMA

2.1 ER DIAGRAM

An entity relationship model, also called an entity-relationship (ER) diagram, is a graphical representation of entities and their relationships to each other, typically used in computing in regard to the organization of data within databases or information systems. An entity is a piece of data-an object or concept about which data is stored.

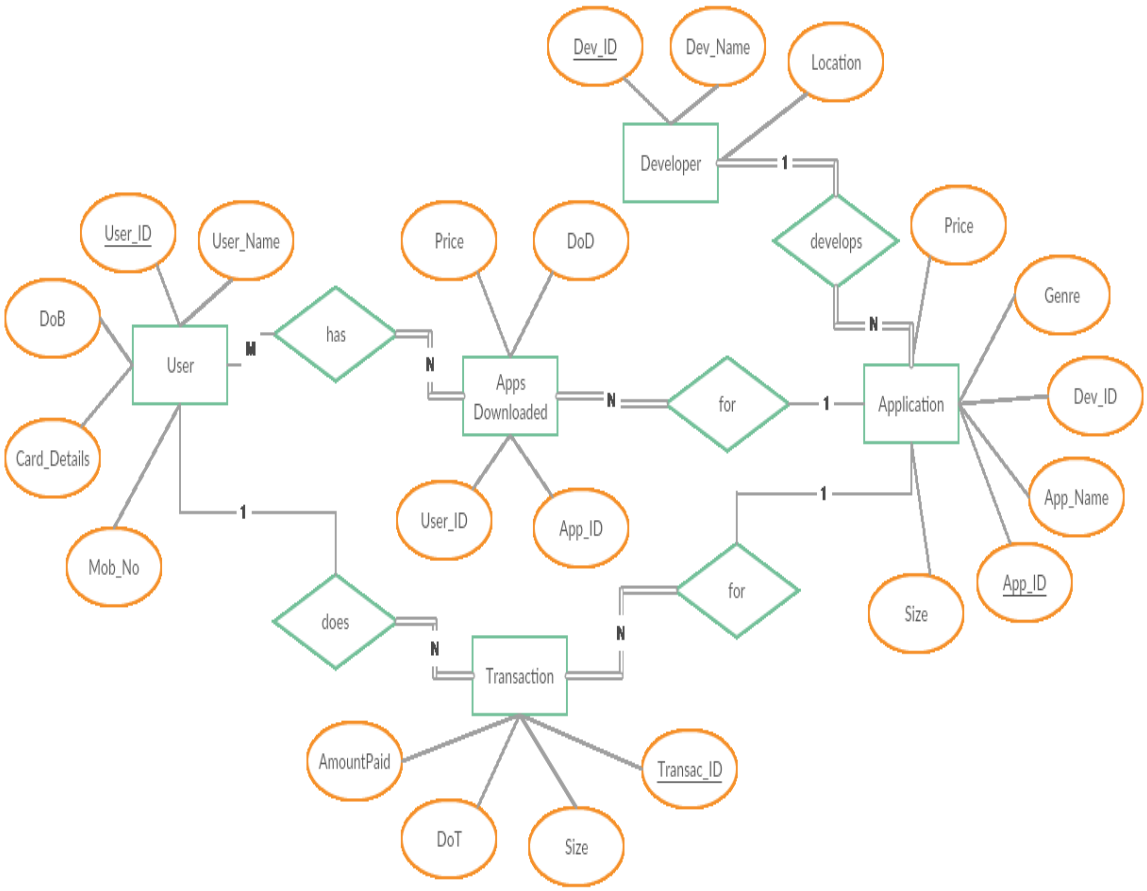


Fig 2.1 – ER DIAGRAM

2.2 RELATIONAL SCHEMA DIAGRAM

A database schema is the skeleton structure that represents the logical view of the entire database. It defines how the data is organized and how the relations among them are associated. It formulates all the constraints that are to be applied on the data.

A database schema defines its entities and the relationship among them. It contains a descriptive detail of the database, which can be depicted by means of schema diagrams. It's the database designers who design the schema to help programmers understand the database and make it useful.

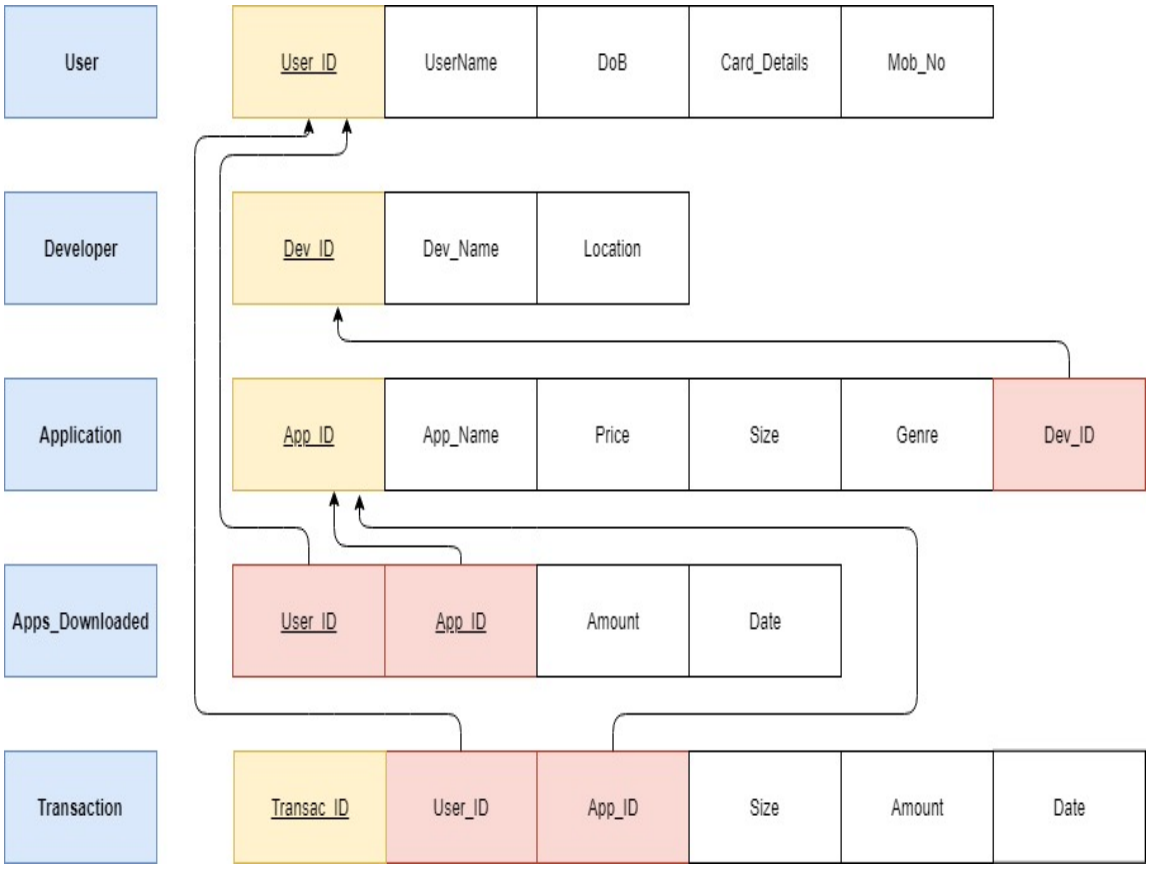


Fig 2.2 – SCHEMA DIAGRAM

Chapter 3

SYSTEM DESIGN

TABLES

APPLICATION

This table is used to store the data of the applications available in the database.

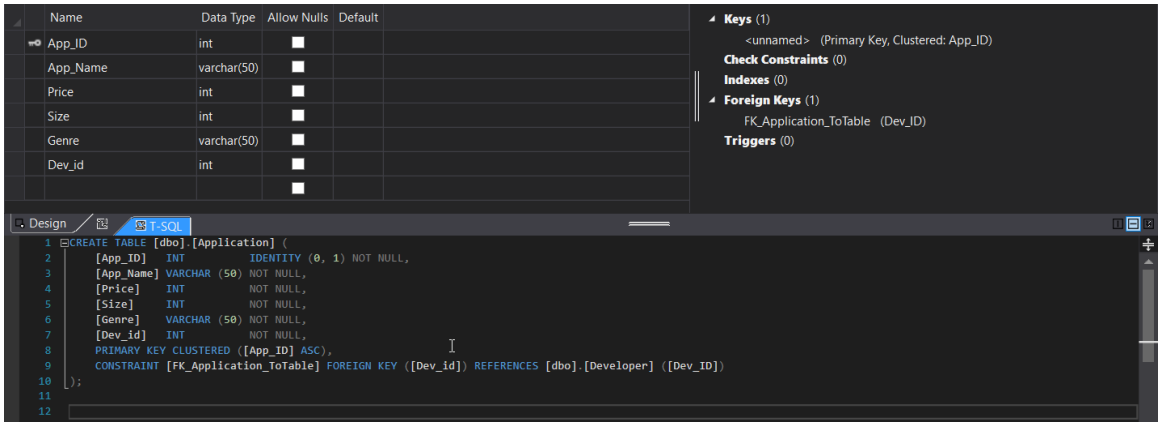


Fig 3.1 – Application Table

DEVELOPER

This table is used to store the details of developers.

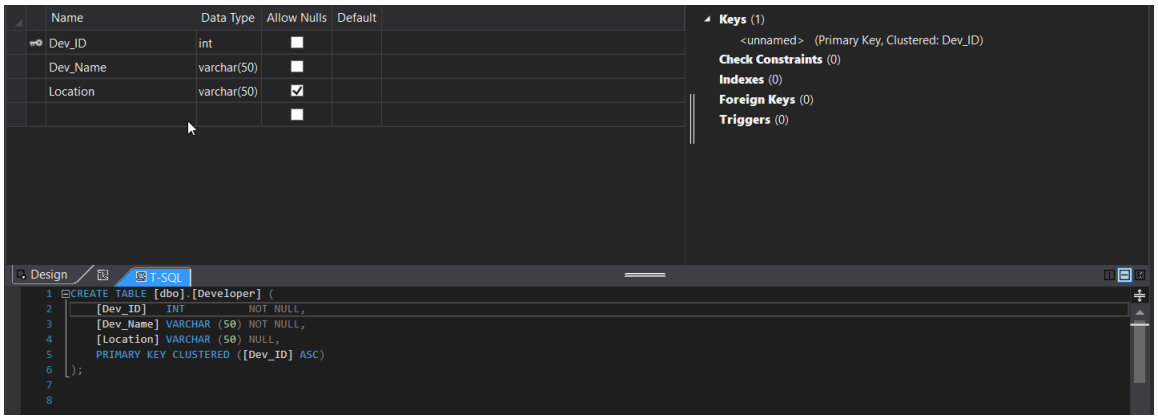


Fig 3.2 – Developer Table

USER

This table is used to store the details of users.

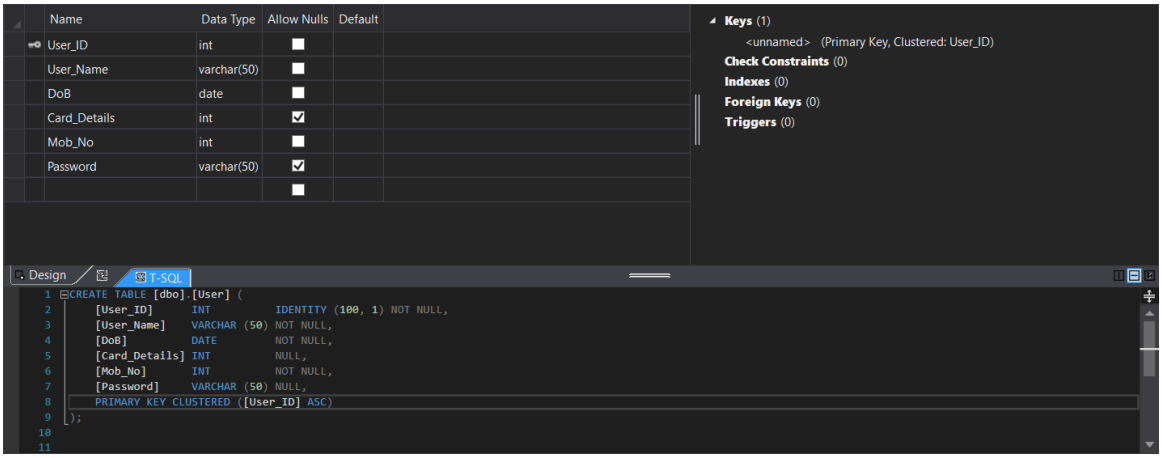


Fig 3.3 – User Table

APPS DOWNLOADED

Contains the details of all the apps that have been downloaded by the users.

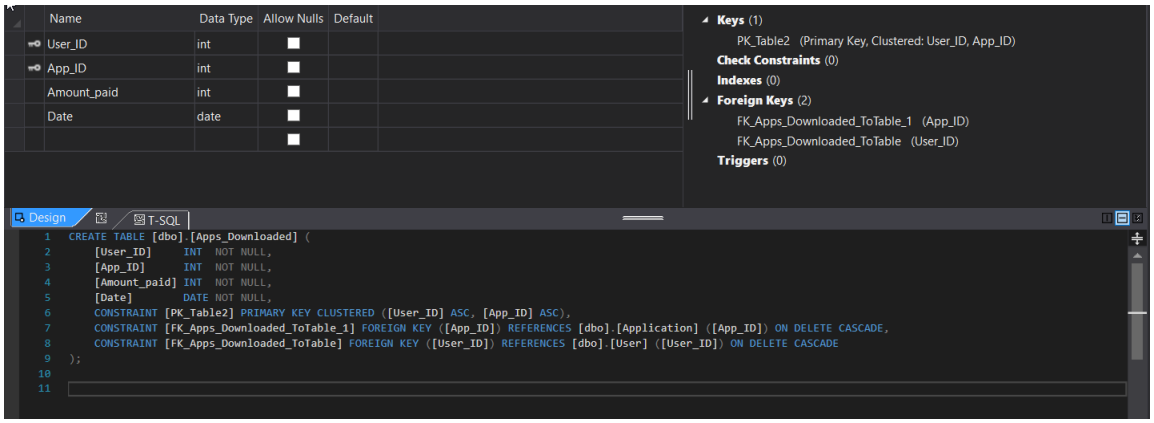


Fig 3.4 – Apps Downloaded Table

TRANSACTIONS

Contains the details of the transactions made in the database.

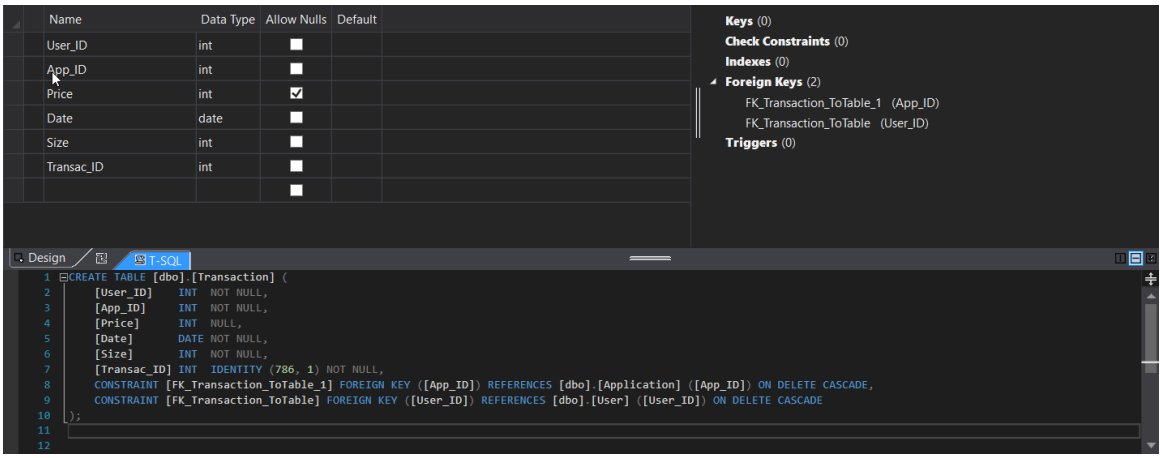


Fig 3.5 – Transaction Table

Chapter 4

IMPLEMENTATION

4.1 Software and Hardware Requirements

Software Requirements

- Front End tools: HTML, CSS
- Back End tools: Visual Studio 2017, C#
- Browser that supports HTML and JavaScript
- IIS EXPRESS
- MS SQL Database

Hardware Requirements

- CPU: Pentium processor and above
- RAM: 2 GB
- HDD: 40 GB

4.2 Code Segment

Login Page

```
namespace dbms_project.login
{
	public partial class WebForm2 : System.Web.UI.Page
	{
		SqlConnection con = new SqlConnection(@"Data
		Source=(LocalDB)\MSSQLLocalDB;AttachDbFilename=E:\Users\Akshat
		\source\repos\dbms project\dbms project\App_Data\mydata.mdf;Integrated
		Security=True");

		protected void Page_Load(object sender, EventArgs e)
		{ }

		protected void Button1_Click(object sender, EventArgs e)
		{
			SqlCommand com = new SqlCommand("Lgn", con);
			com.CommandType =
			System.Data.CommandType.StoredProcedure;
			SqlParameter p1 = new SqlParameter("@user", TextBox1.Text);
			SqlParameter p2 = new SqlParameter("@passwor",
			com.Parameters.Add(p1);
			com.Parameters.Add(p2);
			con.Open();
			SqlDataReader rd = com.ExecuteReader();
			if (rd.HasRows)
			{
				rd.Read();
				string st = TextBox1.Text;
				Session["login"] = st;
				Response.Redirect("user.aspx");
			}
			else
			{
				Label1.Text = "Invalid username or password.";
				Label1.Visible = true;
			 }
		}
	}
}
```

Registration Page

```
namespace dbms_project
{
	public partial class WebForm1 : System.Web.UI.Page
	{
		SqlConnection con = new SqlConnection(@"Data
		Source=(LocalDB)\MSSQLLocalDB;AttachDbFilename=E:\Users\Akshat
		\source\repos\dbms project\dbms project\App_Data\mydata.mdf;Integrated
		Security=True");

		protected void Page_Load(object sender, EventArgs e)
		{ }

		protected void Button1_Click(object sender, EventArgs e)
		{
			try
			{
				if (TextBox3.Text == "" || TextBox2.Text == "" ||
				TextBox4.Text=="")
				{
					Label6.Text = "fields can not be empty";
				}
				else
				{
					SqlCommand cmd = new SqlCommand("insert into
					[dbo].[user] values (@user,@password, @age )",
					con);
					cmd.Parameters.AddWithValue("@user",
					TextBox3.Text);
					cmd.Parameters.AddWithValue("@password",
					TextBox2.Text);
					cmd.Parameters.AddWithValue("@age",
					TextBox4.Text);
					con.Open();
					cmd.ExecuteNonQuery();
					con.Close();
					Label5.Text = "User registered successfully";
					Response.Redirect("~/login/WebForm2.aspx");
				}
			}
			catch
			{
				Label6.Text = "fields can not be empty";
			}}}}
```

Deletion Page

```
namespace dbms_project.developer_login

{

        public partial class pdelete : System.Web.UI.Page
        {
                SqlConnection con = new SqlConnection(@"Data
                Source=(LocalDB)\MSSQLLocalDB;AttachDbFilename=E:\Users\Akshat
                \source\repos\dbms project\dbms project\App_Data\mydata.mdf;Integrated
                Security=True");

                 protected void Page_Load(object sender, EventArgs e)
                { }

                protected void Button1_Click(object sender, EventArgs e)
                {
                        string st = TextBox1.Text;
                        SqlCommand cmd = new SqlCommand("select count(*) from apps
                        where app_name=@u and developer=@p;", con);
                        cmd.Parameters.AddWithValue("@u", TextBox1.Text);
                         cmd.Parameters.AddWithValue("@p",
                         Session["add"].ToString());
                        con.Open();
                        string i = cmd.ExecuteScalar().ToString();
                        int rd = int.Parse(i);
                        if (rd != 0)
                        {
                                if( MessageBox.Show("Are you sure you want to delete the
                                application?", "message", MessageBoxButtons.YesNo) ==
                                DialogResult.Yes)
                                {
                                        SqlCommand cmd2 = new SqlCommand("delete
                                        from apps where app_name=@u and
                                        developer=@p;", con);
                                        cmd2.Parameters.AddWithValue("@u",
                                        TextBox1.Text);
                                        cmd2.Parameters.AddWithValue("@p",
                                        Session["add"].ToString());
                                        cmd2.ExecuteNonQuery();
                                        Label1.Text = "App Deleted";
                                }
                        }
                        else
                        {
                                Label1.Text = "App Not Found";
                        }}}}
```

Stored Procedure

```
CREATE PROCEDURE [dbo].[Lgn]
(
	@user varchar(50),
	@password varchar(50)
)

as

SELECT * FROM [dbo].[User] WHERE [user] = @user AND password = @password
```

Trigger Operation

```
CREATE TRIGGER [Trig]
ON dbo.[Apps_Owned]
FOR INSERT
AS
BEGIN

declare @uid int
declare @aid int
declare @p int
declare @dot date
declare @s int

select @uid = [User_ID] from inserted
select @aid = [App_ID] from inserted
select @p = [Price] from inserted
select @dot = [Date] from inserted
select @s = [Size] from inserted

insert into [dbo].[Transaction] values (@uid,@aid,@p,@dot,@s)

END
```

4.3 Snapshots

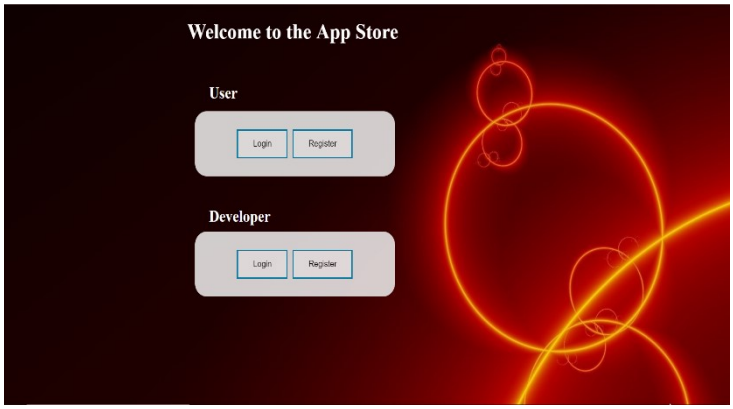


Fig 4.1 Welcome Page
This page provides the option of login and sign up page for both user and developer

Fig 4.2 Developer Login
This page is the login page for Developers where the developer Enter their name and password

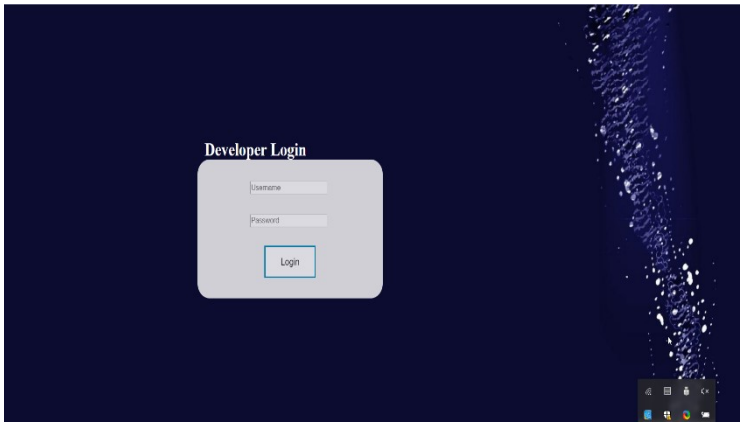
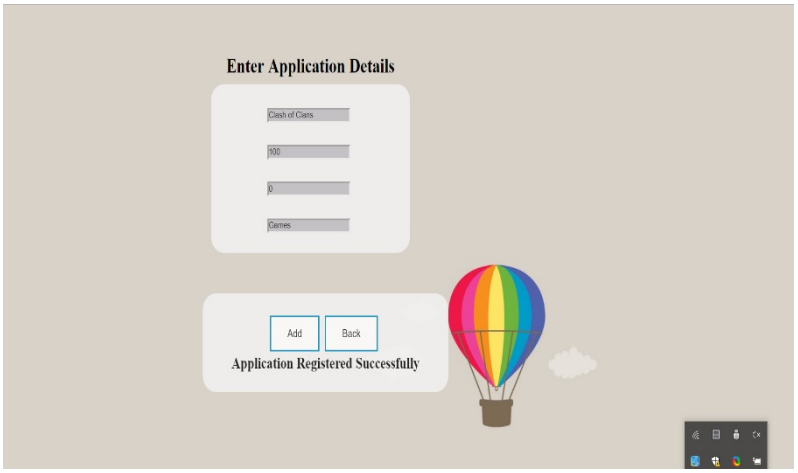


Fig 4.3 Developer Dashboard

This page shows apps owned by the developer and the options.

Fig 4.4 Add New App
This page provides the option to insert new App by the developer



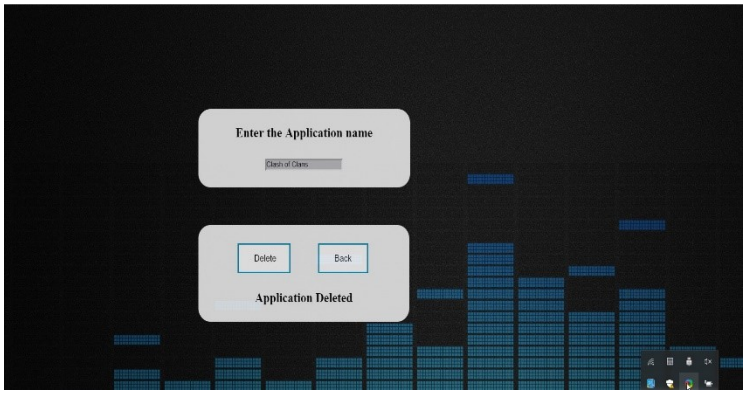
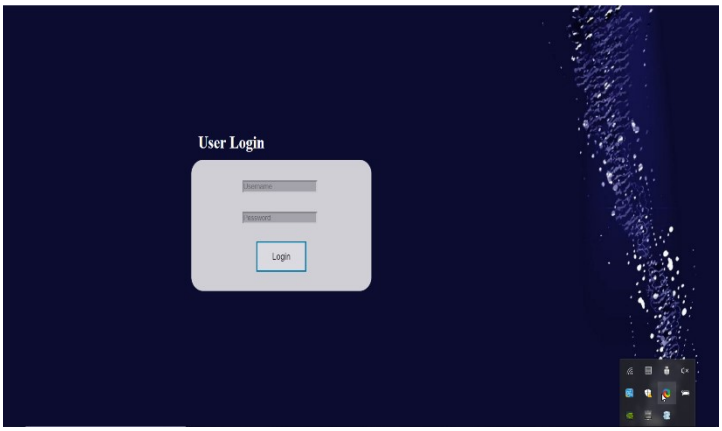


Fig 4.5 Delete an App
This page asks the developer Which App they want to Delete.

Fig 4.6 User Login
This page is the login page for Users where the User Enter their name and password



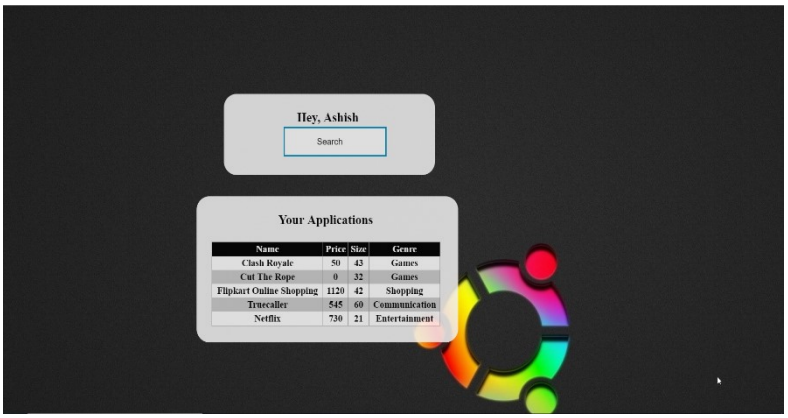
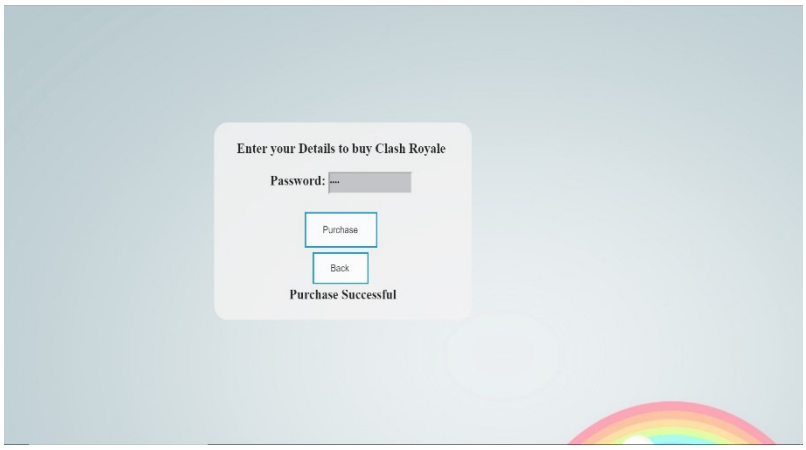


Fig 4.7 User Dashboard
This page shows the
Apps owned by the user
And a search option
To find New Apps.

Fig 4.8 Searching for App
This page is used by the
User when they want to
Search for a new App

Fig 4.9 Search Result
This page shows the result
Of the search page
And gives the option of
Buying the App

Fig 4.10 Transaction page
This page asks the user
For their password to buy
the app



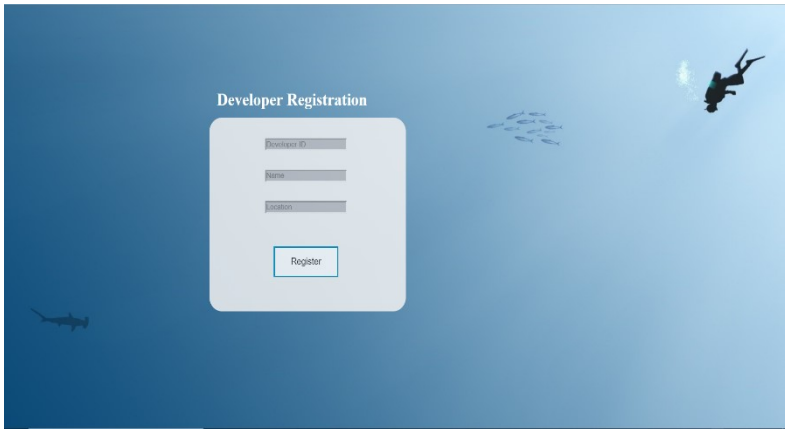


Fig 4.11

Developer Registration

This page is used for Registering the new Developers.

Chapter 5

CONCLUSION AND FUTURE ENHANCEMENT

This project provides a more liberal platform for new developers who want to showcase their applications and for the general users who wants to get more variety in the relevant application they want. This project has very high potential to grow in future.

During this project we learned about the basic Database Management System and how to implement it. To implement the idea behind the project we also learned basic C# for back-end development and HTML and CSS for front-end development. We now feel quite confident in the mentioned languages and can implement other projects using these languages.

The current prototype is for limited number of users and developers, we need to increase the data capacity of this project so that it can be deployed as a final finished product.

Currently the apps can be bought but not be downloaded. So, we need to implement a method through which a user can download the app from the developer's servers. Once the app is downloaded, we need to implement a way through which the user can start the apps via the platform rather than going to the files of the apps to start the apps.

We also need to implement a method through which users can download only the required files rather than the full app when a new update is released by the developer.

We plan to implement a Chatbot for better user and developer experience. They can contact the Chatbot for any query that may arise.

We also plan to implement a trial period of 2 days in which the user can use the purchased app and may opt for a refund if the app does not meet his/her expectations.

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[3] www.wikipedia.com

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Books

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[2] Database management systems (3rd edition) by Raghu Ramakrishna