A Project Report On

**Library Management System**

(INFORMATION TECHNOLOGY)

SEMESTER 7th

SUBMITTED BY

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DEPARTMENT OF INFORMATION TECHNOLOGY

**PILLAI HOC COLLEGE OF ENGINEERING & TECHNOLOGY, RASAYANI**

UNIVERSITY OF MUMBAI

AY 2019-2020

**Certificate**

This is to certify that the project entitled **“Library Management System”** is successfully completed by following student:

|  |  |
| --- | --- |
| **Student Name** | **Roll No.** |
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As per the syllabus & in partial fulfilment for the completion Bachelor’s degree in Information Technology from University of Mumbai, it is also to certify that this is the original work of the candidate done during the academic year 2019-2020.

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Project Guide Head of Department

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Principal

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Internal Examiner External Examiner

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**ABSTRACT**

Android platform has become more popular and it holds a maximum number of Users when compared to all other platform. Before the introduction of the Android Operating System the access to the Library documents was done only by the librarian. This paper suggests a method for the library access to go public that is the public can also access the library database. The Library Access Application helps the patrons to access their required information and queries without computers or the librarians but through their android devices which saves their time and energy. The Application retrieves the information stored in the library database through the library server for example checking whether the books are available in the library or borrowed without intervening anyone. User’s access of library will be stored in the database for suggestion during a search for books. Due-date of the borrowed books from a library will be intimated by the app as a notification prior to the deadline. Users are privileged to suggest books for the library and they are notified about their suggestion, by the Librarian. This paper brings a new idea of the public to access the library.

**Chapter 1 Introduction**

* **Fundamentals**

With the increase in the number of readers, better management of libraries system is required. The Library management system focuses on improving the management of libraries in college. “What If you can check whether a book is available in the library through your phone?” or “you can reserve a book or issue a book from your phone sitting at your home!”. The Integrated Library Management system provides you the ease of issuing, renewing, or reserving a book from a library within your college through your phone. The Integrated Library Management system is developed on the android platform with the help of barcode scanner which basically focuses on issuing, returning the book.

* **Literature Survey**

1)Currently, we are using manual system for issue, return, update, maintain as well as searching the books in library, it's more irritates.2) Student may not find available books in library because he/she can't perfectly search it through manually.3) More paper work and less safe than digital document e.g. fire and water safety.4) Fine collection calculation is required and these will be chance for error and a lot of work and burden on paper work. 5)How many books are available in current stock? Definitely its unknown.

* **Problem statement**

**App to manage and record all the activities performed by librarian**

Library Management System is a Mobile application software to maintain record related to books stock maintenance, issue, returns, search, fines and all necessary requirements for library to manage day to day operations with smartphone. Here we are using Smartphone with Barcode Scanner facility for issue as well as return the books.

* **Objective**

1. Fast work, less fatigue of employee and student because of Barcode Scanner facility.
2. Easily search books, cause it's online.
3. Secure data less paper work.
4. No error in fine calculation.
5. Easily stock manage by librarian with smartphone.
6. Students can easily reserve particular book from own smartphones, if it's available in library.
7. If a book is not available now, students can set reminder and when that book is return back in library then book availability message is automatically send to requested students.

* **Software requirements**
* Software used:

1. Android studio
2. MySQL
3. Camera API

* Language used:

1. Java
2. PHP

**Chapter 2 Implementation of Mini Project**

**2.1 Coding implementation of mini Project**

package com.nautanki.loginregapp;

import android.content.DialogInterface;

import android.content.Intent;

import android.support.v7.app.AlertDialog;

import android.support.v7.app.AppCompatActivity;

import android.os.Bundle;

import android.view.View;

import android.widget.Button;

import android.widget.EditText;

import android.widget.TextView;

import android.widget.Toast;

import com.android.volley.AuthFailureError;

import com.android.volley.Request;

import com.android.volley.Response;

import com.android.volley.VolleyError;

import com.android.volley.toolbox.StringRequest;

import org.json.JSONArray;

import org.json.JSONException;

import org.json.JSONObject;

import java.util.HashMap;

import java.util.Map;

//kkkkk

public class MainActivity extends AppCompatActivity {

TextView textView;

Button login\_button;

Button b10;

EditText UserName, Password;

String username, password;

String login\_url = "https://untruthful-oscillat.000webhostapp.com/ ";

AlertDialog.Builder builder;

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

getSupportActionBar().hide();

setContentView(R.layout.activity\_main);

User user=new User(MainActivity.this);

if(user.getName()!="")

{

Intent intent=new Intent(this,Choose.class);

startActivity(intent);

finish();

}

builder = new AlertDialog.Builder(MainActivity.this); //Init builder.

login\_button = (Button) findViewById(R.id.bn\_login);

b10=(Button)findViewById(R.id.button10);

UserName = (EditText) findViewById(R.id.login\_name);

Password = (EditText) findViewById(R.id.login\_password);

//Click listner for login button

login\_button.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View view) {

//Check if they entered un and pwd

username = UserName.getText().toString();

password = Password.getText().toString();

Toast.makeText(MainActivity.this, username+password, Toast.LENGTH\_SHORT).show();

if (username.equals("")||password.equals("")){

builder.setTitle("Error");

//Call display Alert. Code it now.

displayAlert("Enter a valid username or password.");

} else{

//Auth user using script.

StringRequest stringRequest = new StringRequest(Request.Method.POST,

login\_url, new Response.Listener<String>() {

@Override

public void onResponse(String response) {

//Handle response, from server its a JSON array

try {

JSONArray jsonArray = new JSONArray(response);

JSONObject jsonObject = jsonArray.getJSONObject(0);

String code = jsonObject.getString("code");

if (code.equals("login\_failed")){

builder.setTitle("Login failed");

displayAlert(jsonObject.getString("message"));

} else{

String name=jsonObject.getString("name");

User user=new User(MainActivity.this);

user.setName(name);

builder.setTitle("Login Success!");

displayAlert1(jsonObject.getString("message")+""+jsonObject.getString("name"),jsonObject.getString("name"));

}

} catch (JSONException e) {

e.printStackTrace();

}

}

}, new Response.ErrorListener() {

@Override

public void onErrorResponse(VolleyError error) {

Toast.makeText(MainActivity.this,"Error from ErroResponse",Toast.LENGTH\_LONG).show();

error.printStackTrace();

}

}){

//We need to pass username and password, thus override getparams

@Override

protected Map<String, String> getParams() throws AuthFailureError {

//As return type is a map create a map

Map<String, String> params = new HashMap<String, String>();

params.put("email", username);

params.put("pass", password);

return params;

}

};

//Add string request to request queue

MySingleton.getInstance(MainActivity.this).addToRequestque(stringRequest);

}

}

});

}

public void displayAlert(String message){

builder.setMessage(message);

builder.setPositiveButton("OK", new DialogInterface.OnClickListener() {

@Override

public void onClick(DialogInterface dialogInterface, int i) {

UserName.setText(""); Password.setText("");

}

});

AlertDialog alertDialog = builder.create(); //create

alertDialog.show(); //Show it.

}

public void displayAlert1(String message, final String name){

builder.setMessage(message);

builder.setPositiveButton("Go Ahead", new DialogInterface.OnClickListener() {

@Override

public void onClick(DialogInterface dialogInterface, int i) {

UserName.setText(""); Password.setText("");

//Start another activity. Create an intent.

Intent intent = new Intent(MainActivity.this, Choose.class);

startActivity(intent);

finish();

}

});

AlertDialog alertDialog = builder.create(); //create

alertDialog.show(); //Show it.

}

public void logOut(View view) {

new User(this).removeUser();

Intent intent=new Intent(this,MainActivity.class);

startActivity(intent);

finish();

}

public void register(View view) {

Intent intent=new Intent(this,Register.class);

startActivity(intent);  
 }}

**2.2 Snapshots of working project**

|  |  |
| --- | --- |
| 1)Splash page | 2)Login Page |
| 3)Sign up page | 3)Actions page |
| 5)Issue book page | 6)More Actions |

**Chapter 3**

**3.1 Conclusion**

In this paper we have presented a Library Management System Application, developed for Android using SQL Database. The main aim of the application is to make admin to easily access their library account in order to check the availability of the books in the library. The Library Access System Application saves Users estimable time by making complete procedure online. The problem of data storage is solved by storing them in popular open source SQL database.

**3.2 Future Scope**

Manage by voice search.  
Use for attendance system as well.  
Easily portable on various platform e.g.-shop  
Online book reservation system.  
All books available in pdf read from anywhere.  
Online fine collection.  
Price detect from various e-commerce platform.  
Generate automatically barcode for new books

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