Project Report

On

CDAC Online Pathshala

Submitted in partial fulfillment for the award of

Diploma in Advance Computing (E-DAC) from

C-DAC, ACTS (Pune)

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Introduction

As we know, today every individual whether it is a student or a teacher or a working profession, etc. uses the Internet for research purposes or any course by being at your home. This is nothing but Online Learning. So, to develop such a system where all the courses that you want to learn are available at your fingertips this project is developed in the same way which is a CDAC-Pathshala application.

The facilitator here is the admin who will add the courses and add Topics according to the courses added to it; it adds PDF Document for every topic plus the video tutorial. The Student is another user who will view the courses and can enroll in them. Students' roles also have a discussion section where if any student has a query he/she can raise it. The last role is the faculty whose responsibility is to view queries raised by admin and to resolve them.

This application will not only help the students but also the faculty and he/she both can have a common medium to be connected.

Objective

The main objective of this project is to provide a good application where everybody can have access to courses. It provides a platform where students can enroll for the course of their choice.

Here, Admin who is the facilitator can add courses, the student can enroll in them. The faculty will resolve the queries of students.

Hardware & Software Requirement:

Hardware Interfaces

- Minimum Hardware requirement
- Processor: P4 3.0 GHz
- RAM:1 GB or Higher
- Monitor
- Mouse
- Hard disk: 80 GB

Software Interfaces

- Minimum Software requirement
- Java (Spring and Hibernate)
- Apache Tomcat Server

All these types of software automatic configure inside operating system after installation it having Java, MYSQL, Apache and operating system base configuration file, it doesn't need to configure manually.

Methodologies

There are three main users of this application one is the Admin, the admin here can be the facilitator, the other is the Student and the last one is faculty.

1) Admin (Facilitator)

- Admin can VIEW Courses.
- Admin can ADD Courses
- Admin can Add Topics.
- Admin can VIEW its profile.

2) Student

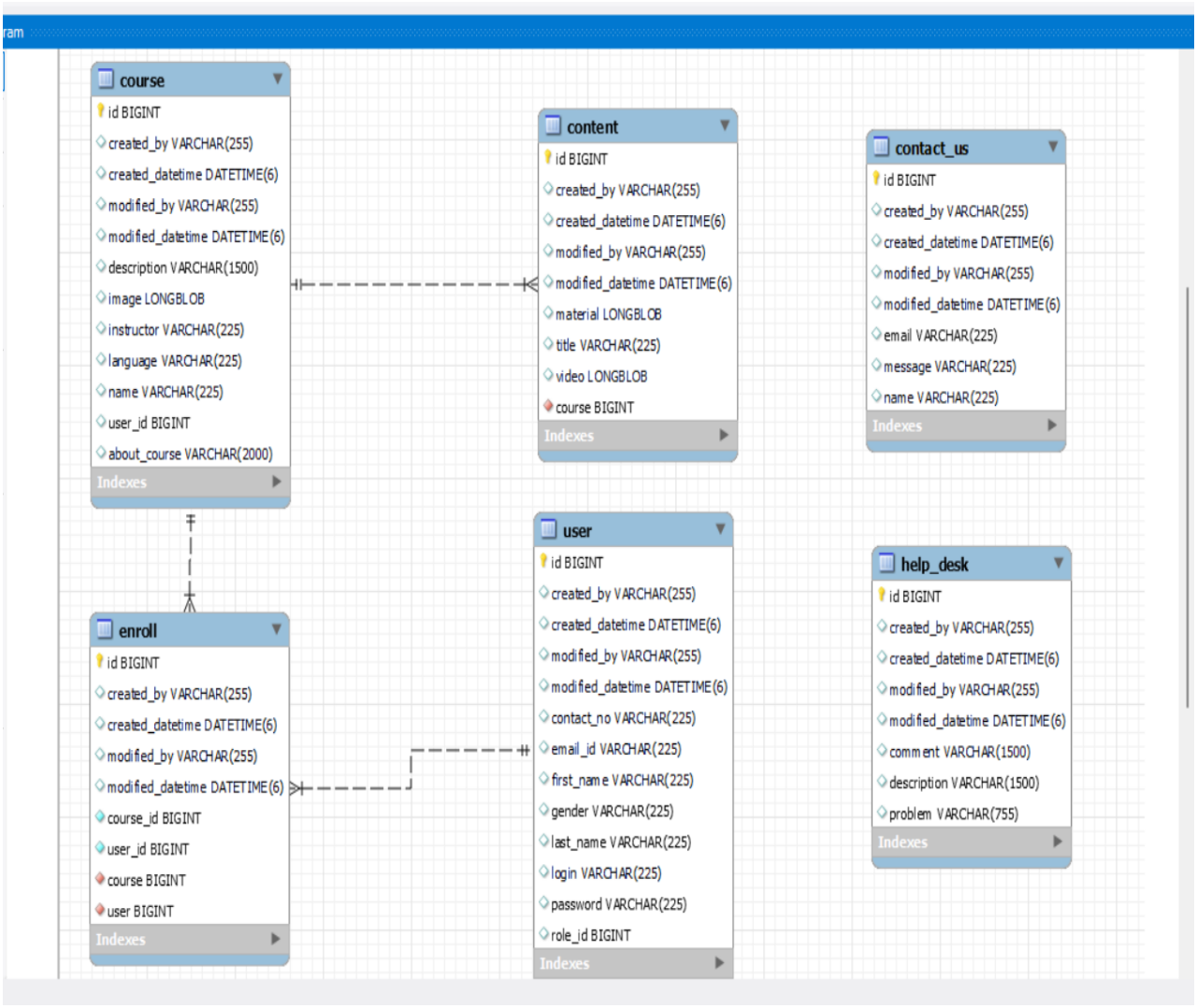
- Students can VIEW Courses.
- Students can search for the course.
- Students can enroll in the courses.
- Students can View the Topics.
- Students can learn using PDF or VIDEO.
- Students can download both PDF as well as VIDEO.
- Students can raise a query.
- Students can VIEW its profile.

3) Faculty

- Faculty can VIEW queries raised by students.
- The faculty can Answer the queries.
- Faculty can VIEW its profile.

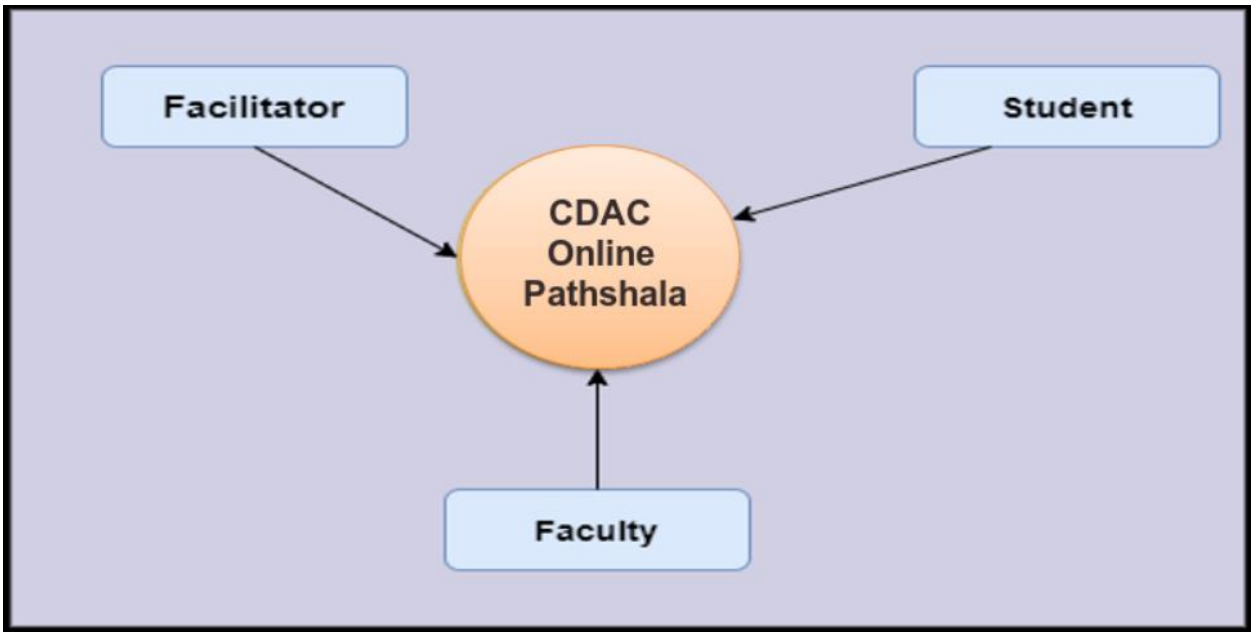
System Analysis

2.1- E R DIAGRAM

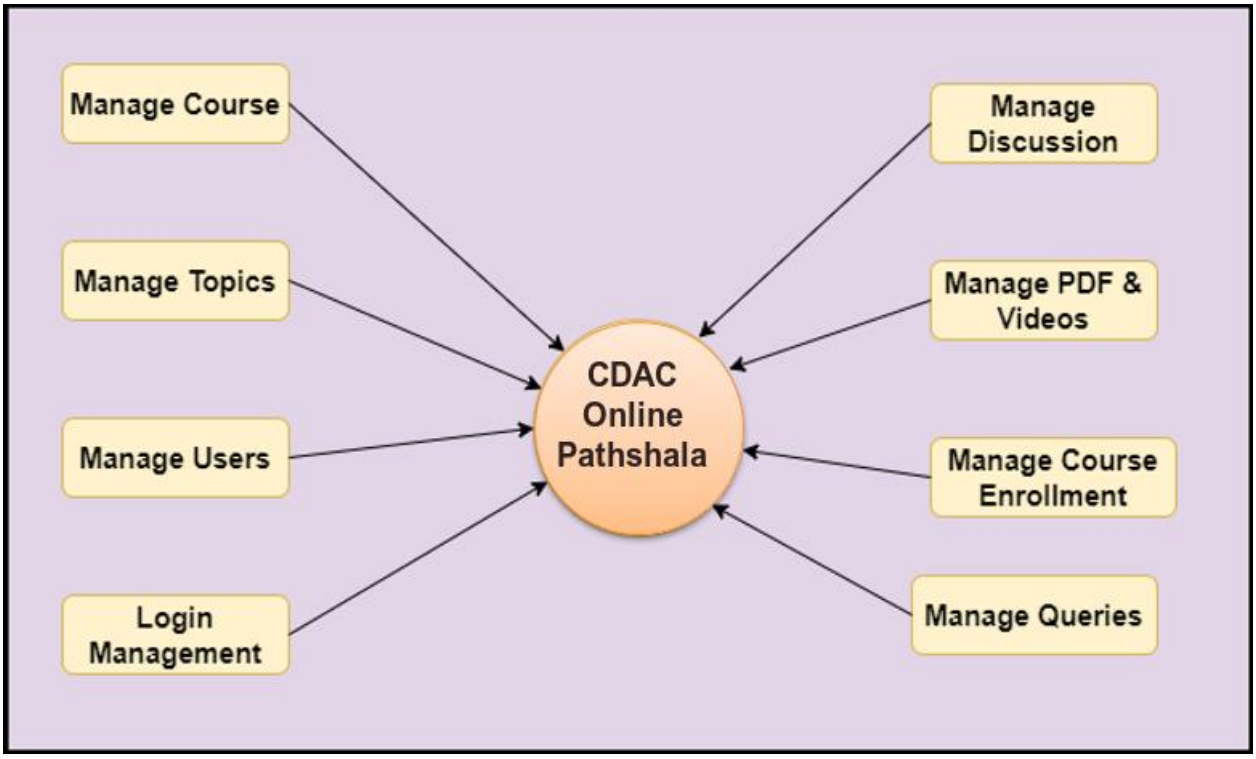


Data Flow Diagram (DFD)

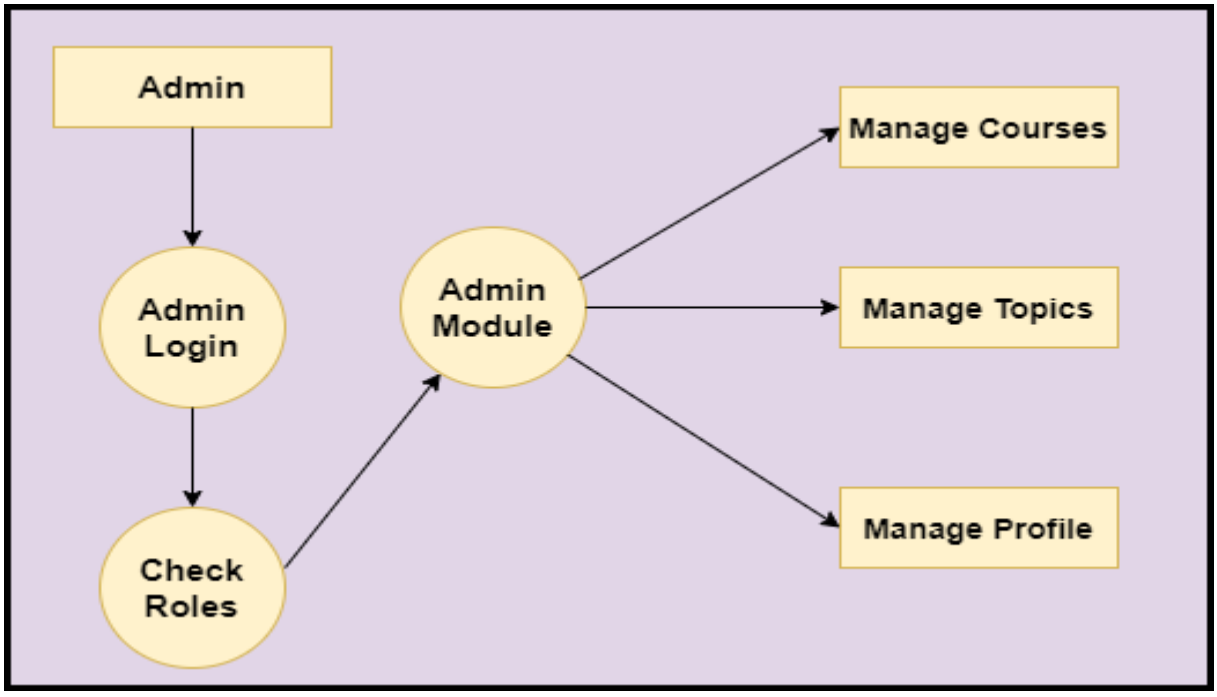
Level 0:



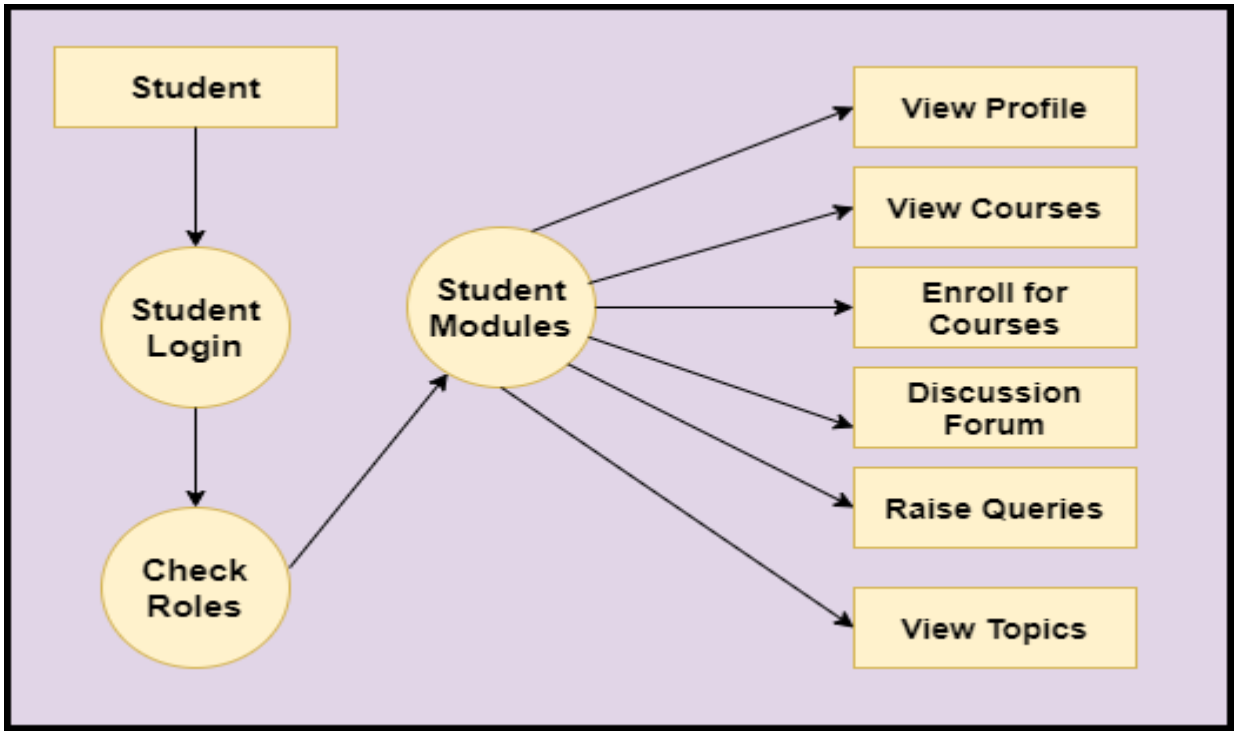
Level 1:



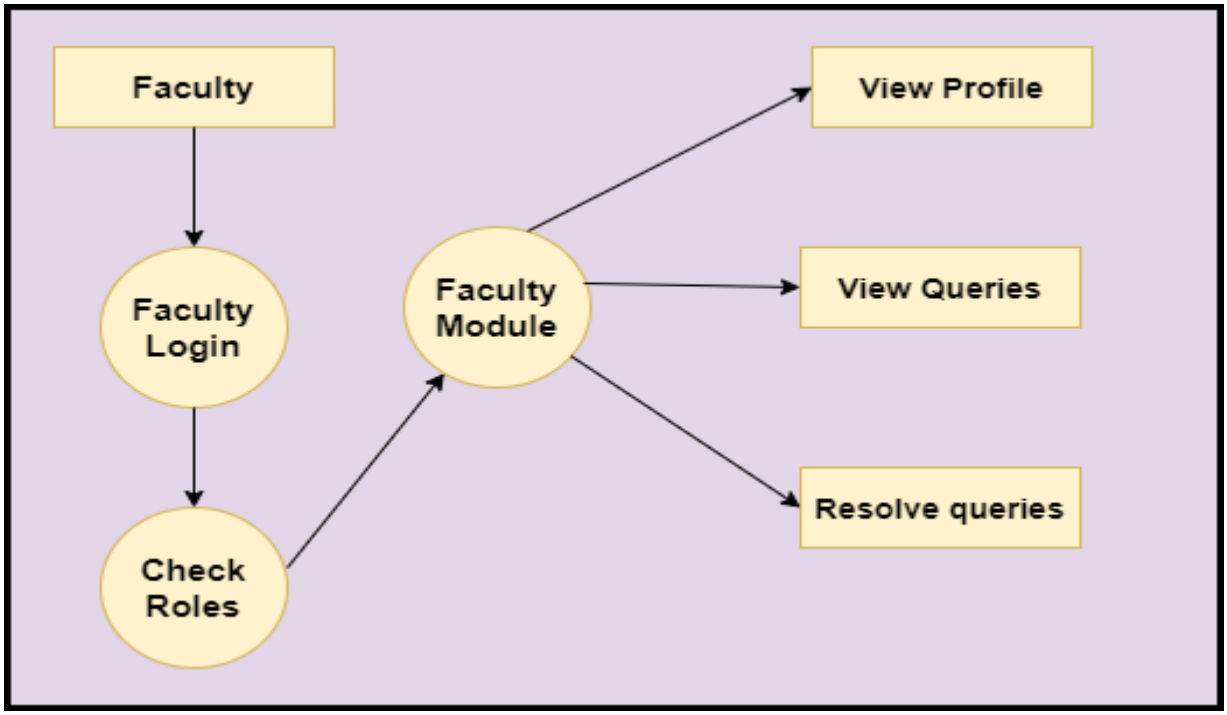
Level 2 - DFD Admin



Level 2 - DFD Student



Level 2 - DFD Faculty



Feasibility:

This project will be developed on computer, so first check whether the technology is technically available or not. Now a day's computer interaction with any job becomes common for any kind of job or work.

And because of increasing usage of Computer, Computer is also available with a variety of hardware. Vendors can fulfill any type of hardware requirement. The whole project is developed by some special tools or by using languages and databases, which are also available in a variety.

Preliminary investigation of a system examines the feasibility of a system that is useful to an organization. It is the first phase of system development.

The main objective of this phase is to identify the current deficiencies in the user's environment and to determine which existing problem are going to be solve in proposed system and also which new function needs to be added in proposed system.

An important outcome of such preliminary investigation is to determine whether the system that will meet all needed requirements.

Thus, three tests are carried out on the system namely operation, technical and economical.

Any project is beneficial if and only satisfies the organization requirement. For any new system setup, it only meets to be communicated and work the other supporting system.

The new system meets all existing operations since it provides right information at a right time to the right user. A Leigh man can easily operate with the system.

Technical Feasibility examines whether the technology needed is available and if it is available then it feasible to carry out all project activities.

The technical needs of a system include:

- The facility to produce outputs in a given time.
- Ability to process large number of transaction at a particular speed.
- Giving response to users under certain conditions.

The technology needed for our system is mainly:

- Latest version of browsers.
- Any operating system.

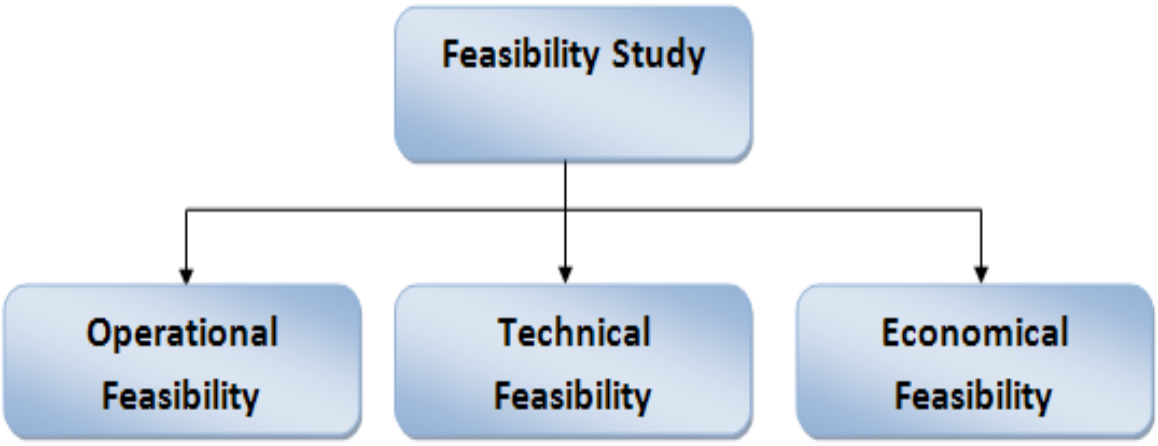
These technologies are available which helps to carry out the system efficiently.

Economical feasibility of a system examines whether the finance is available for implementing the new system and whether the money spent is recoverable the satisfaction.

The cost involves is in designing and developing a good investment for the organization.

Thus, hardware requirements used for proposed system are very standard. Moreover, by making use of proposed system to carry out the work speedily will increase and also saves the valuable time of an organization.

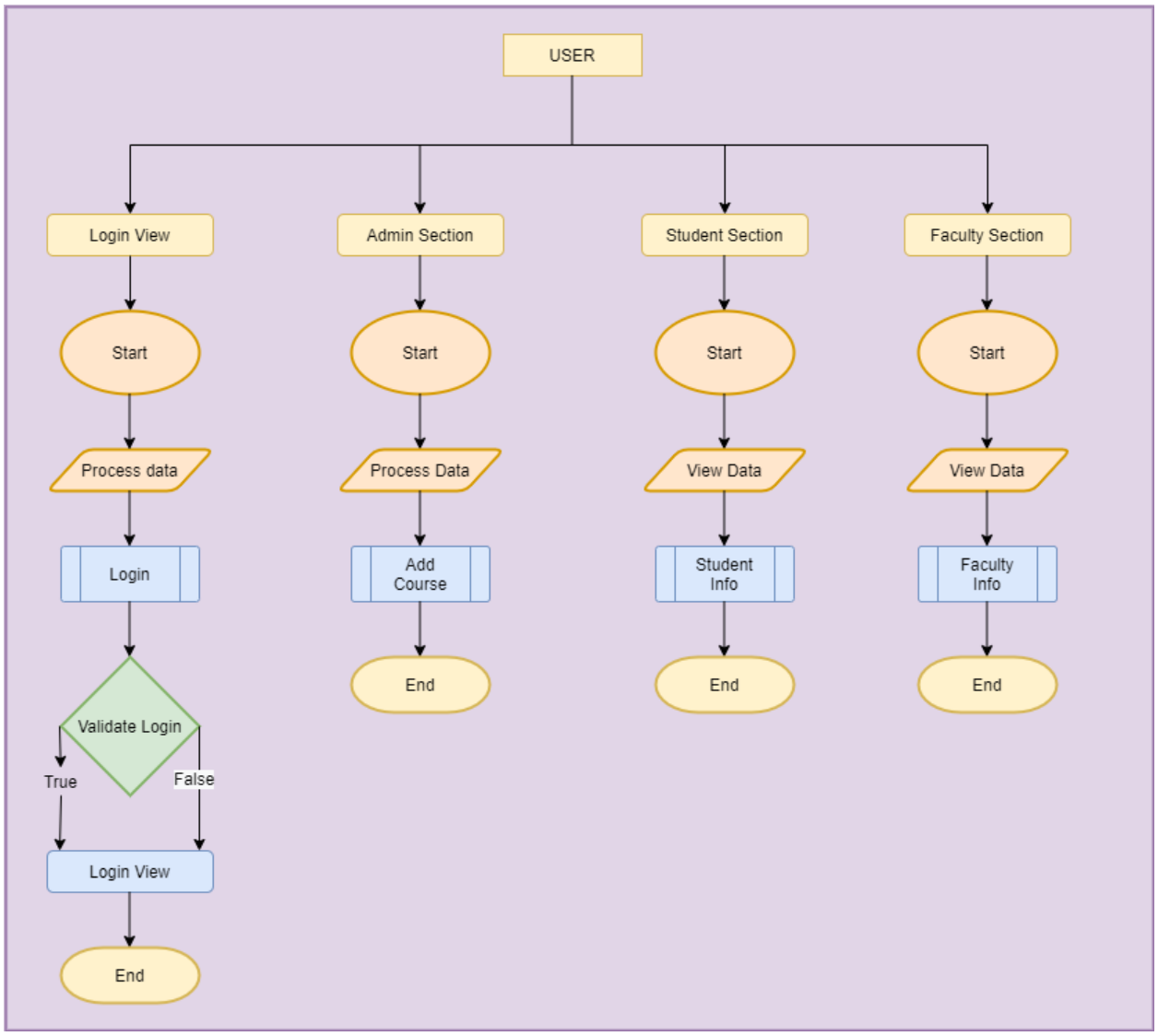
In the proposed system the finance is highly required for the installation of the software's which can also be recovered by implementing a better system.



Chapter-3

Design:

System Flow Chart:



Data dictionary:

Data validation:

Procedures are designed to detect errors in data at a lower level of detail. Data validations have been integrated in the system in almost every area where there is a possibility for the user to commit errors. The system will not recognize invalid data.

Whenever an invalid data is keyed in, the system immediately prompts the user and the user has to again key in the data and the system will accept the data only if the data is correct. Validations have been integrated where necessary.

The system is designed to be a user friendly one. In other words the system has been designed to communicate effectively with the user. The system has been designed with pop up menus.

Different Type of Validation:

- Data type validation;
- Range and constraint validation;
- Code and Cross-reference validation; and

Structured validation

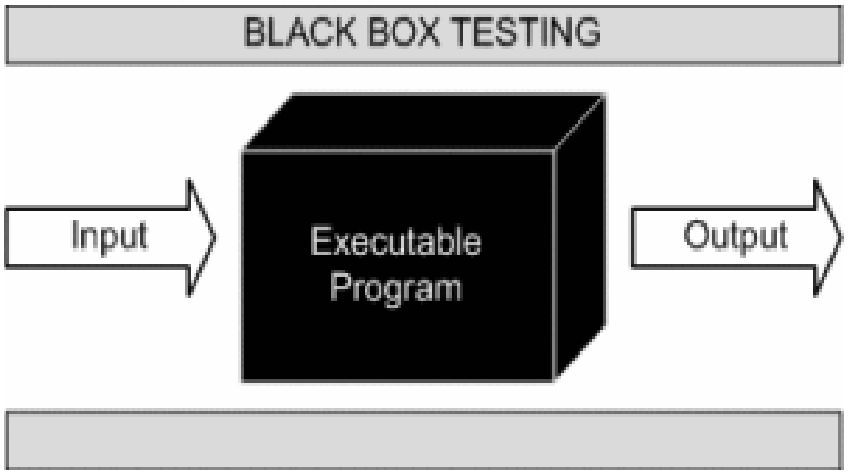
Implementation and Testing:

Black-Box Testing:

Black Box Testing, also known as Behavioural Testing, is a software testing method in which the internal structure/ design/ implementation of the item being tested is not known to the tester. These tests can be functional or non-functional, though usually functional.

This can be following way:

- Input interfacing
- Processing
- Output interfacing



This method is named so because the software program, in the eyes of the tester, is like a black box; inside which one cannot see. This method attempts to find errors in the following categories:

- Incorrect or missing functions
- Interface errors
- Errors in data structures or external database access
- Behaviour or performance errors
- Initialization and termination errors.

White-Box Testing:

White Box Testing ,also known as Clear Box Testing, Open Box Testing, Glass Box Testing, Transparent Box Testing, Code-Based Testing or Structural Testing is a software testing method in which the internal structure/ design/ implementation of the item being tested is known to the tester.

The tester chooses inputs to exercise paths through the code and determines the appropriate outputs. Programming know-how and the implementation knowledge is essential.

White box testing is testing beyond the user interface and into the nitty-gritty of a system. This method is named so because the software program, in the eyes of the tester, is like a white/ transparent box; inside which one clearly sees.

Sr. No	Test Case Title	Description	Expected Outcome	Error Message	Result
1.	Sign-up	User should see Signup page to enter the details	After signup User registered successfully message will show	No Error	Passed
2.	Sign in	user should enter Login and password	user able to login and land on Home page	No error	Passed
3.	Courses	student should be able to search for required courses	student be able to get required field material	No error	Passed
4.	Help Desk	student should enter a problem & Description	student problem added to helpdesk successfully	No error	Passed
5.	View Queries	student should be able to see what Quires added	student should be able to see comment of admin	No error	Passed
6.	Profile	After clicking on profile tab	student should get all information about courses related data	No error	Passed

7.	Logout	After clicking on logout button	student should be able to land on Login page	No error	Passed
8.	Dashboard	After clicking admin can see view, add courses & query button	After clicking on button admin will land on respective page	No error	Passed
9.	Add courses	Admin should be able to add courses	Admin should be able to add name, instructor & course documents	No error	Passed
10.	View courses	After clicking admin must be able to see all the courses added	Admin can see all courses also he can delete it	No error	Passed
11.	View Queries	Admin should be able to see all queries mentioned by student	Admin can be able to reply the queries	No error	passed

Limitations and Future Application of the Project:

Futures Enhancement:

- In future we can expand this project on the web.
- In future, we can make a display popular courses which has more enrollment.

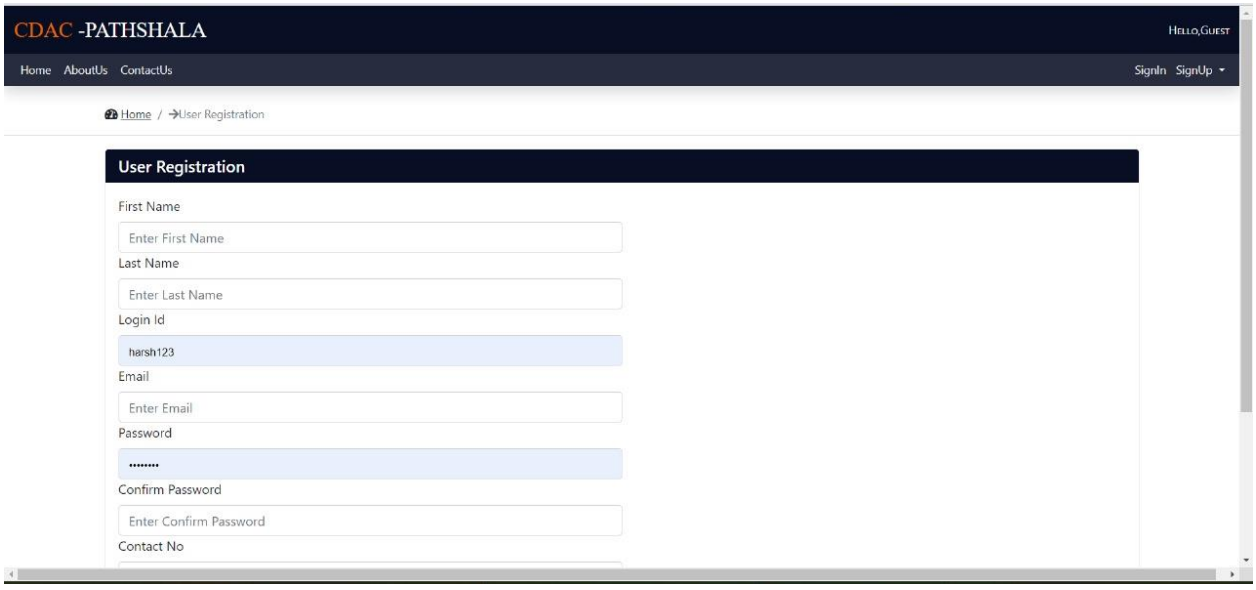
Limitation :

In this, we don't block the students from accessing any course.

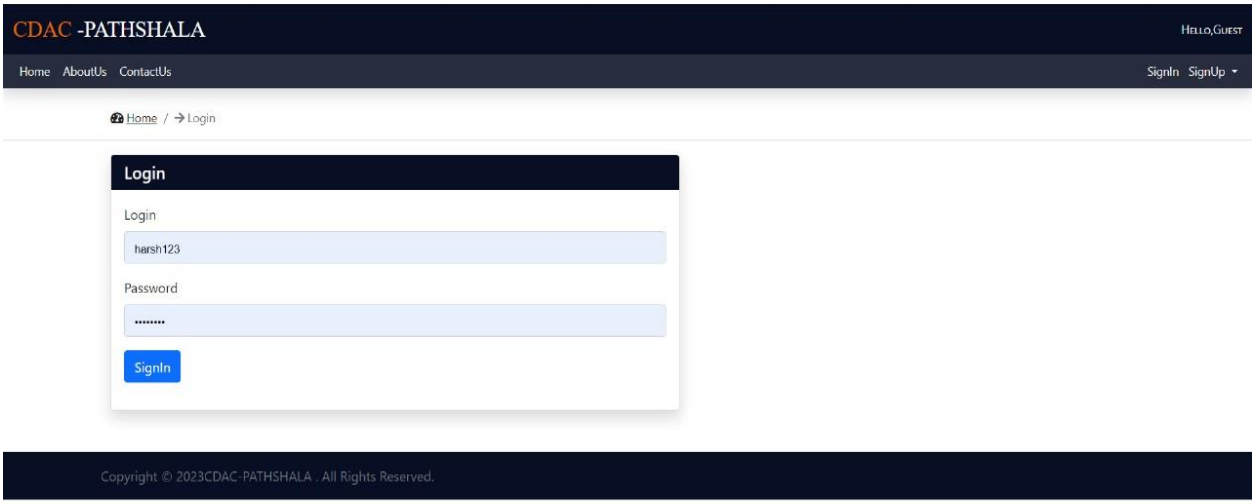
Screen Snapshot

1. Home page

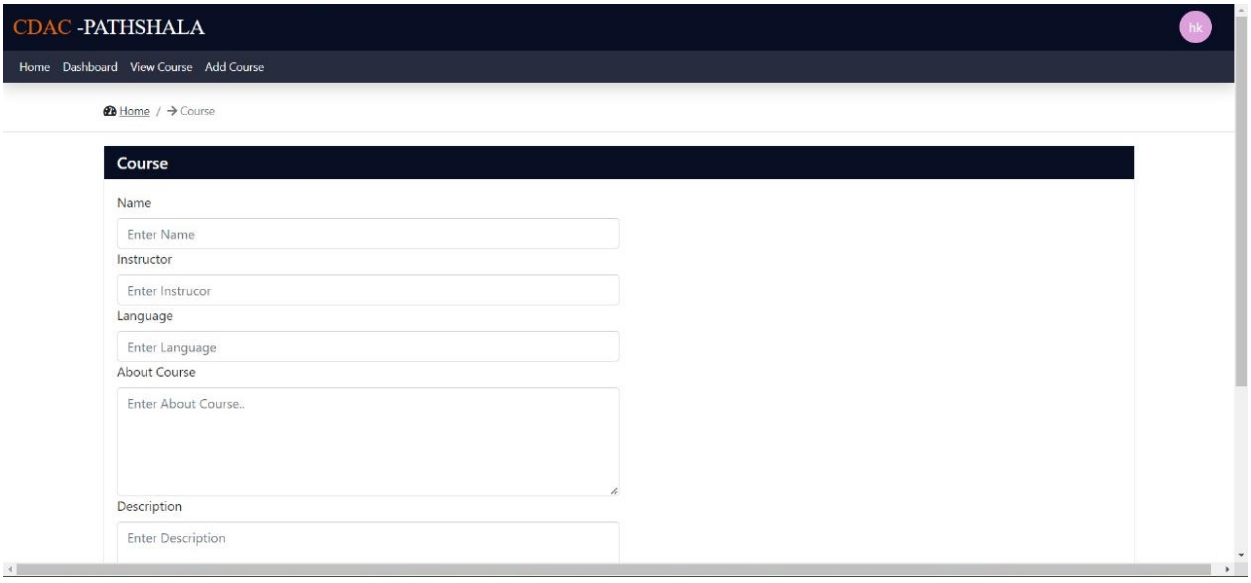
2. User Registration Page



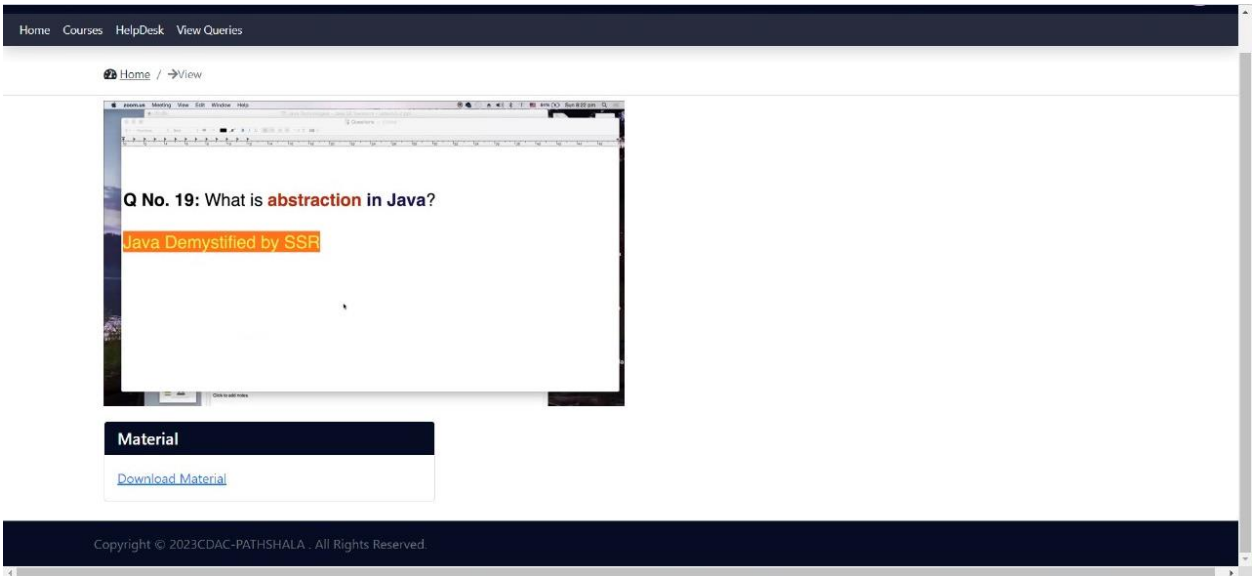
3. Login Page



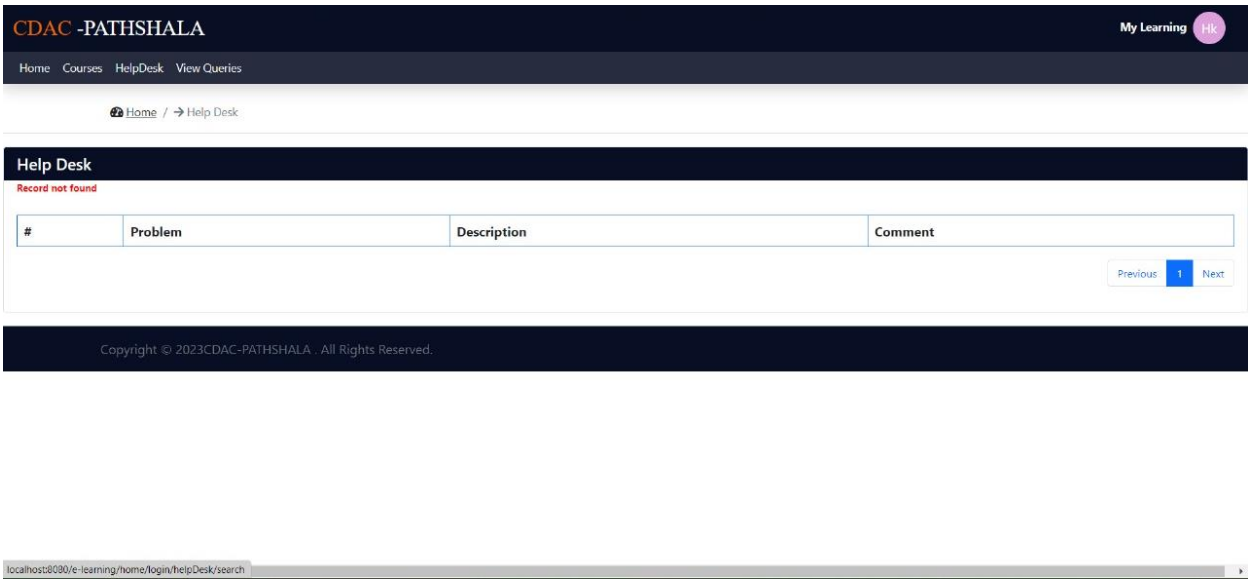
4. Course Page



5. Recorded Session Page



6. Help Desk Page



Conclusion

Online Learning has become a new trend in this era. So this project provides us the good help in achieving all the goals. The whole purpose of this application is to provide a medium where the faculty and student can interact with each other like if student have a query he/she can raise it also, students can make an enrollment in the courses available.

This project can be used by the Colleges, Universities where the Online Learning is a priority. It also provides a platform for students to view/enroll different courses by admin.

This application is designed in such a way that any future modification can be done most easily.