

E-LEARNING SYSTEM

**Under guidance Of
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**Ardent Computech Pvt Ltd (An ISO 9001:2008 Certified)
Module-132 , SDF Building , Sector – V , Salt Lake City , Kolkata 700091**

**A
Project Report
Submitted in Partial Fulfillment of the Requirements
for the Award of the
Bachelor of Computer Application**

Project Carried Out At



**Ardent Computech Pvt Ltd (An ISO 9001:2008 Certified)
Module-132 , SDF Building , Sector – V , Salt Lake City , Kolkata 700091**

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Title of the Project : E-Learning System

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☐☐☐☐☐

Working and Teaching experience of the guide _____ Years

Software used in the project :

- **SQLite Server**
- **Ubuntu 20.04(Linux OS)**
- **Vs Code**
- **Google Chrome**
- **Adobe Illustrato**

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Signature of the Guide

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PROJECT RESPONSIBILITY **FORM**

E-Learning Website

SERIAL NO.	NAME OF MEMBER	RESPONSIBILITY
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5.	Chandrima Nandi	Documentation

SELF CERTIFICATE

This is to certify that the dissertation/project proposal entitled “**E-Learning System**” is done by us, is an authentic work carried out for the partial fulfillment of the requirements for the award of the certificate of **Bachelor of Computer Application** under the guidance of **Mr. Joyjit Guha Biswas**. The matter embodied in this project work has not been submitted earlier for award of any certificate to the best of our knowledge and belief.

Signature of the Student

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- A. Souvik Acharjya
- B. Indrajit Acharjya
- C. Arojit Sarkar
- D. Ankita Dhara
- E. Chandrima Nandi

CERTIFICATE OF APPROVAL

This is to certify that this proposal of Minor project, entitled “**E-Learning System**” is a record of bona-fide work, carried out by: 1.Souvik Acharya, 2.Indrajit Acharjya, 3.Arojit Sarkar, 4.Ankita Dhara, 5.Chandrima Nandi under my supervision and guidance through the Ardent Computech Pvt. Ltd. In my opinion, the report in its present form is in partial fulfillment of all the requirements, as specified by The Calcutta Anglo Gujarati College as per regulations of the *Ardent*®. In fact, it has attained the standard, necessary for submission. To the best of my knowledge, the results embodied in this report, are original in nature and worthy of incorporation in the present version of the report for Bachelor of Computer Application.

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1. ARDENT COMPUTECH PVT.LTD.

Ardent Computech Private Limited is an ISO 9001-2008 certified Software Development Company in India. It has been operating independently since 2003. It was recently merged with ARDENT TECHNOLOGIES.

Ardent Technologies

ARDENT TECHNOLOGIES is a Company successfully providing its services currently in UK, USA, Canada and India. The core line of activity at ARDENT TECHNOLOGIES is to develop customized application software covering the entire responsibility of performing the initial system study, design, development, implementation and training. It also deals with consultancy services and Electronic Security systems. Its primary clientele includes educational institutes, entertainment industries, resorts, theme parks, service industry, telecom operators, media and other business houses working in various capacities.

Ardent Collaborations

ARDENT COLLABORATIONS, the Research Training and Development Department of ARDENT COMPUTECH PVT LTD is a professional training Company offering IT enabled services & industrial trainings for B-Tech, MCA, BCA, MSc and MBA fresher's and experienced developers/programmers in various platforms. Summer Training / Winter Training / Industrial training will be provided for the students of B.TECH, M.TECH, MBA and MCA only. Deserving candidates may be awarded stipends, scholarships and other benefits, depending on their performance and recommendations of the mentors.

Associations

Ardent is an ISO 9001:2008 company.

It is affiliated to National Council of Vocational Training (NCVT), Directorate General of Employment & Training (DGET), Ministry of Labor & Employment, and Government of India.

2. INTRODUCTION

Learning new things are way more difficult when it comes to Online Platform, but we provide the easiest way to learn skills. A customer will search for a favorite courses , internships and jobs which will be on this platform, they can either choose them or bookmark them for further purpose.

Take U Forward Intends different types of courses, internships and jobs which can be choose or filter by customers. Customers will get updates about every current jobs or internships going on.

The system deals with every aspects of customers, from processing and choose the finest opportunity about their better future. Buying and applying is done by a valid customer with appropriate identity. This system for Take U Forward is completely safe, secure and is a very popular method that is revolutionizing the way in which the food industry operates.

2a. OBJECTIVE

The online learning prepares students to understand, contribute, and succeed in a rapidly changing society, thus making the world a better and more just place. We will ensure that our students develop both the skills that a sound education provides and the competencies essential for success and leadership in the emerging creative economy.

We will also lead in generating practical and theoretical knowledge that enables people to better understand our world and improve conditions for local and global communities.

SYSTEM ANALYSIS

3a. IDENTIFICATION OF NEED

System analysis is a process of gathering and interpreting facts, diagnosing problems and the information to recommend improvements on the system. It is a problem-solving activity that requires intensive communication between the system users and system developers.

System analysis or study is an important phase of any system development process. The system studies the minutest detail and gets analyses. The system analysis plays the role of the interrogator and wells deep into the working of the present system. The System is viewed as a whole and the input to the system are identified. The outputs from the organization are traced to the various processes.

System analysis is concerned with becoming aware of the problem, identifying the relevant and Decisional variables, analysis and synthesizing the various factors and determining an optimal or at least a satisfactory solution or program of action.

A detailed study of the process must be made by various techniques like interviews, questionnaires etc. The data collected by these sources must be scrutinized to arrive to a conclusion.

The conclusion is an understanding of how the system functions. This system is called the existing system.

The proposal is reviewed on user request and Suitable changes are made. This is loop that ends as soon as the user is satisfied with proposal.

3b. FEASIBILITY STUDY

Experts in eLearning design suggest that any organization considering a step into E-Learning undertakes a comprehensive feasibility study to assess possible pathways for eLearning implementation. Such feasibility study will identify viable pathways to increase revenue, student retention, and success of individually designed programs, whether in higher or secondary education or professional development.

A feasibility study combines up-to-date pedagogical research with best practice in implementation of eLearning tools acknowledging that organizational specifics may call for online, blended, or even classroom/field delivery. A feasibility study is conducted in a team with subject experts combining the specifics of delivery with alternative E-Learning delivery methods.

An example of such a feasibility study would analyse suitability of E-Learning tools, their adaptation and customisation to organizational needs and the most efficient implementation.

OpnUp has conducted studies of this nature for adult education programs with both fully online and blended delivery, whereby some solutions were introduced for synchronous and others for asynchronous teaching environments.

Some educational models can benefit from competency-based learning; however, an analysis of the success factors in competency-based learning is needed to secure institutional transition and adequate student support.

Only a careful feasibility analysis can secure return on investment in learning resources needed for successful implementation of online learning tools. While the choices are abundant, there are associated risks that need to be considered when evaluating

feasibility of digital texts, audio and video, digital images, publisher and instructor generated content, simulations, and game-based learning opportunities.

The first step towards successful implementation of online delivery is organisation specific insight into the risks that are associated with eLearning programs and a broad understanding of pedagogic and structural implications in online course delivery.

The second step in the feasibility study is to assess the metrics and tools that may contribute to underlying success factors when considering eLearning solutions.

The third, maybe the most important step, is the implementation plan for the strategy of eLearning deployment.

A feasibility study concludes its findings with simulation models, cost - benefit analysis and market assessment. This leads to the calculation of the potential return on investment for each of the possible solutions.

OpnUp delivers an unbiased feasibility study that will serve as an excellent resource for decisions about implementing eLearning tools. OpnUp is at the forefront of eLearning strategies and implementation tools.

3c. WORK FLOW

Preparation activities

E-Learning workflow covers the learning process of employees when they do courses with learning materials from the learning catalog and do not visit any internal or external trainings or events. Before employees engage themselves into the self-education process, HR, Local HR or Training Manager normally assigns certain learning materials from the learning catalog to employees, marking them as recommended or mandatory so that employees could see which learning courses they should complete first. Learning materials can be assigned individually or to a group (by job role, learning group, or job grade). Mandatory courses are added to employees' development plans and set as Missing Mandatory Trainings. An assigned course may also have prerequisite learning materials (courses that must be completed prior to starting the course). However, it depends on the Learning Prerequisites Mode setting for the Learning module whether it is mandatory to complete prerequisite learning materials or only recommended.

Working with the development plan

Employees can assign a learning course to themselves or launch learning courses from the personal development plan. In the E-Learning workflow, the following scenarios are possible:

The employee wants to add a mandatory course assigned to him by the manager or HR to the development plan. To see the list of such courses, the employee selects the View Missing Mandatory Trainings check box on the My Development Plan page. A course may have Request Required check box selected (usually for classroom or external trainings).

If the request is required, the training request needs to be approved first before it can be added to the development plan.

The employee will only have the Send Request action available. The Manager will need to approve the training request. As a result of approval, if the Training Request Approval Action setting is set to create activity, the training will be approved and a development activity will be created automatically in the employee's development plan. If the Training Request Approval Action setting is set to Approve Only, the training request will be approved, but a development activity will not be created automatically; HR, Local HR, or Training Manager as an additional step will also need to click Register to create the corresponding development activity in the employee's development plan.

If the request is not required, the employee can add the training course to the development plan right away by clicking Add to My Plan.

The employee wants to add a course from the learning catalog. To do this, click Assign from Catalog and then select a course you want to add to your plan. A course may have Request Required check box selected. The approval procedure is the same as when adding a mandatory or recommended course.

The employee wants to assign a curriculum, which is a combination of learning materials with a similar topic or purpose. To do this, the employee selects a curriculum from the drop-down list and clicks Assign Curriculum. The approval procedure is the same as when adding a course from the catalog, but in this case the approval is sent automatically. After the courses from the curriculum were approved if necessary, the curriculum, broken down into development activities, becomes available in the development plan. Also development needs with the name of the curriculum will be created.

Launching a course or a quiz

After a learning course has been added to the development plan, the employee can launch a development activity by clicking the corresponding action in the development plan or in the learning material details, which can be viewed when clicking a learning material in the learning catalog:

Launch Course - for activities all except quizzes. However, this action will be available only if learning material was attached to the course on the Add Course form, such as a web link, e-learning SCORM package, or other file (which can be added using the Link E-Learning field) such as a PowerPoint presentation, a document, a video, etc. If the learning material was attached to the course using the Upload Document action (which is available under Actions when you click a created course), the Launch Course action will not be available, and the employee will have to click the development activity title and download the attached file, such as a document, video or other material to do such a course.

The employee studies the course until he or she is ready to mark it complete.

Launch Quiz - for quizzes created using the quiz builder in Lanteria HR. If it is a quiz, the employee answers the questions in the quiz, completes the quiz and closes the quiz form.

Completing the course

After the employee completes the course, the development activity can be marked as completed. To do this, the employee clicks Mark Complete in the development plan. The status of the completed changes to Completed and the course becomes inactive. To see inactive courses, the employee can choose View All in the personal development plan.

As a result of course completion, a certificate can be automatically issued by the corresponding job at night if the certificate was specified during the course creation. To see the issued certificate, the employee can click My Grade book in the development plan.

Additionally, if the Collect Feedback on Completion check box was selected during the course creation, an email with the link to the

feedback form will be sent to the employee. After filling the feedback form, the rating of the course will be updated.

A development activity with a quiz is marked complete automatically as well as marked as inactive as soon as the employee completes the quiz. The employee can always review the completed quiz to see how the questions were answered.

They can do it from the list of inactive activities by setting the filter to View All, and then clicking Review Quiz next to the development activity with the completed quiz.

3d. STUDY OF THE SYSTEM

Modules:

The modules used in this software are as follows:

- **LOGIN:** This module is for ADMIN and Consumer
ADMIN has the authority to Insert, Update and Delete
consumer, branch, add to cart, ADMINISTRATOR
has the Authority to insert, Update, Delete consumer details.
- **HOME**
: This page contains the information about SMS.
- **INTERNSHIP:** This page contains the information about the
faculties for specific: This page contains an overview of
highlights for other pages.
- **ABOUT-US** courses.
- **JOB:** This page contains the information of
eachbranch in details.
- **COURSES:** This page contains the updated information
aboutthecourses that are available.
- **PAYMENTDETAILS:**
- **INSTALLMENT:** This page contains the information about
theInstallment part by part.
- **NEW USER:** This page contains minute details of the each
andevery details of student from the time of admission till
time of certification.

3e. INPUT AND OUTPUT

Input: -

Customer will log username + password + social account(facebook ,github) + google account

Admin will login using username + password

Admin insert and modify the details of Courses, Internships, Job opening details

Output: -

User can view their applications list

Admin can view the details of customers, applications and feedbacks from other customers.

3f. SOFTWARE REQUIREMENTS SPECIFICATION

Software Requirements Specification provides an overview of the entire project. It is a description of a software system to be developed, laying out functional and nonfunctional requirements. The software requirements specification document enlists enough and necessary requirements that are required for the project development. To derive the requirements, we need to have clear and thorough understanding of the project to be developed. This is prepared after the detailed communication with project team and the customer.

The developer is responsible for: -

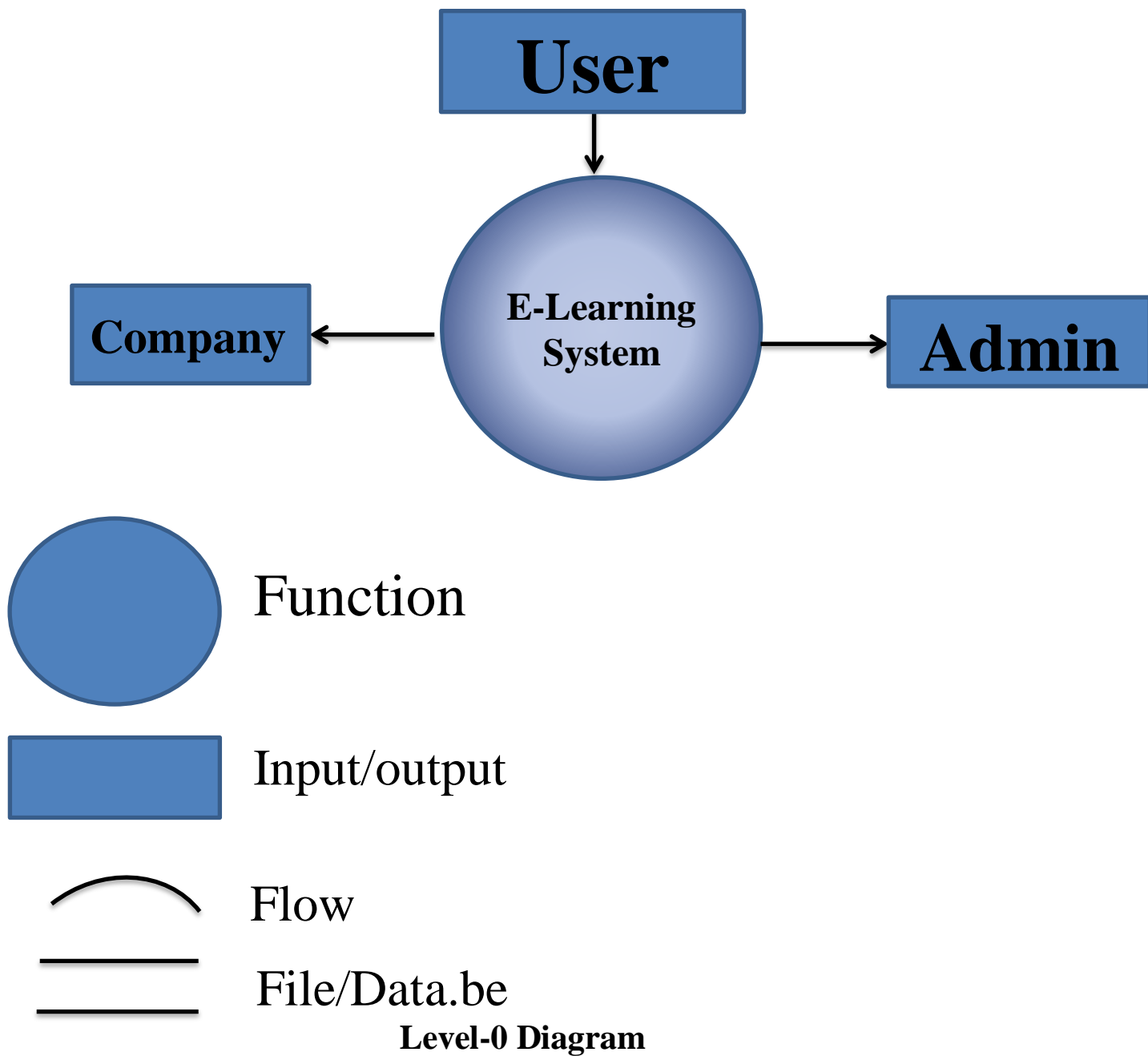
- ✓ Developing the system, which meets the SRS and solving all the requirements of the system?
- ✓ Demonstrating the system and installing the system at client's location after acceptance testing is successful.
- ✓ Submitting the required user manual describing the system interfaces to work on it and also the documents of the system.
- ✓ Conducting any user training that might be needed for using the system.
- ✓ Maintain the system for a period of one year after installation.

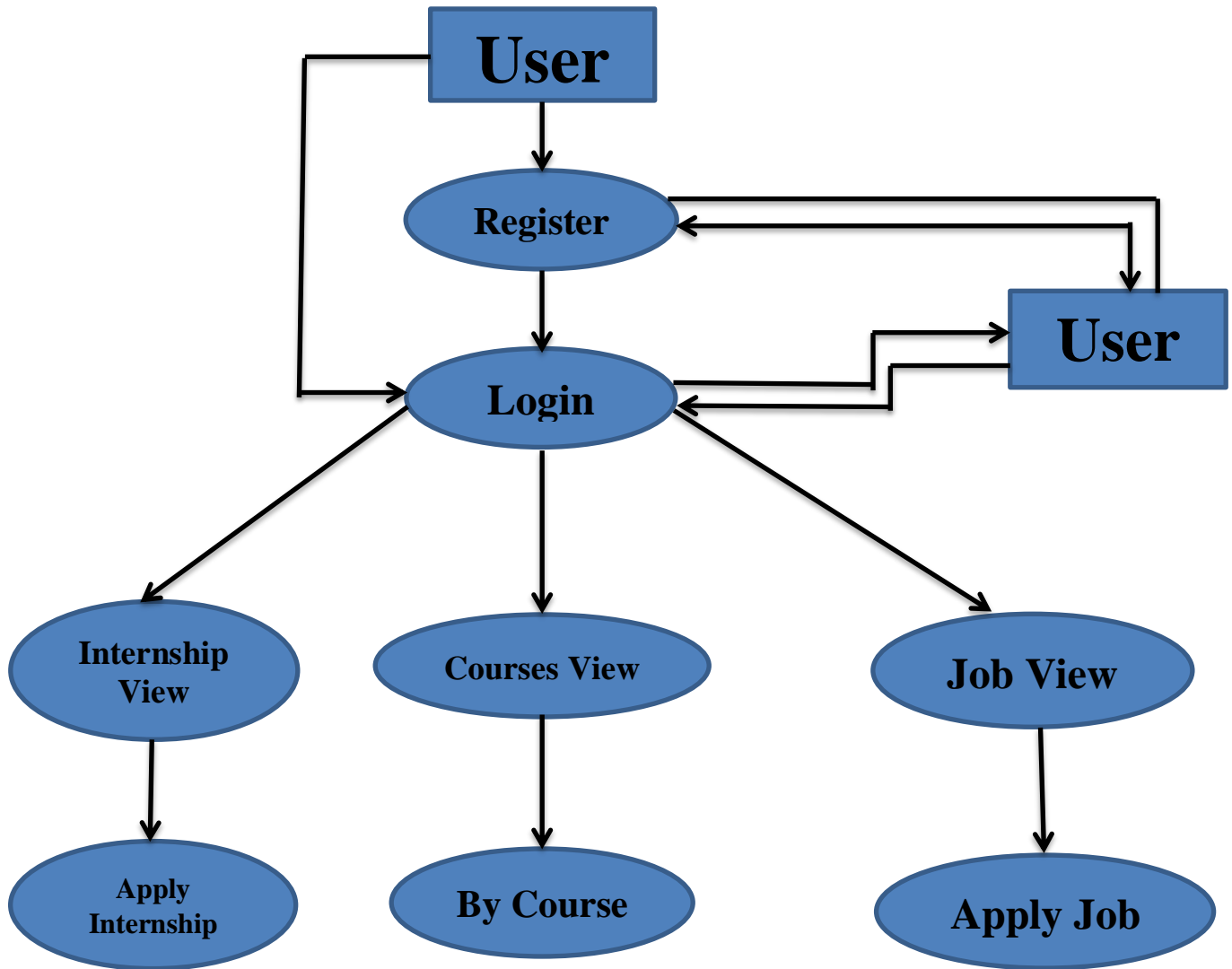
SOFTWARE

- SQLite Server
- Ubuntu 20.04(Linux OS)
- Vs Code
- Google Chrome
- Adobe Illustrato

SYSTEM DESIGN

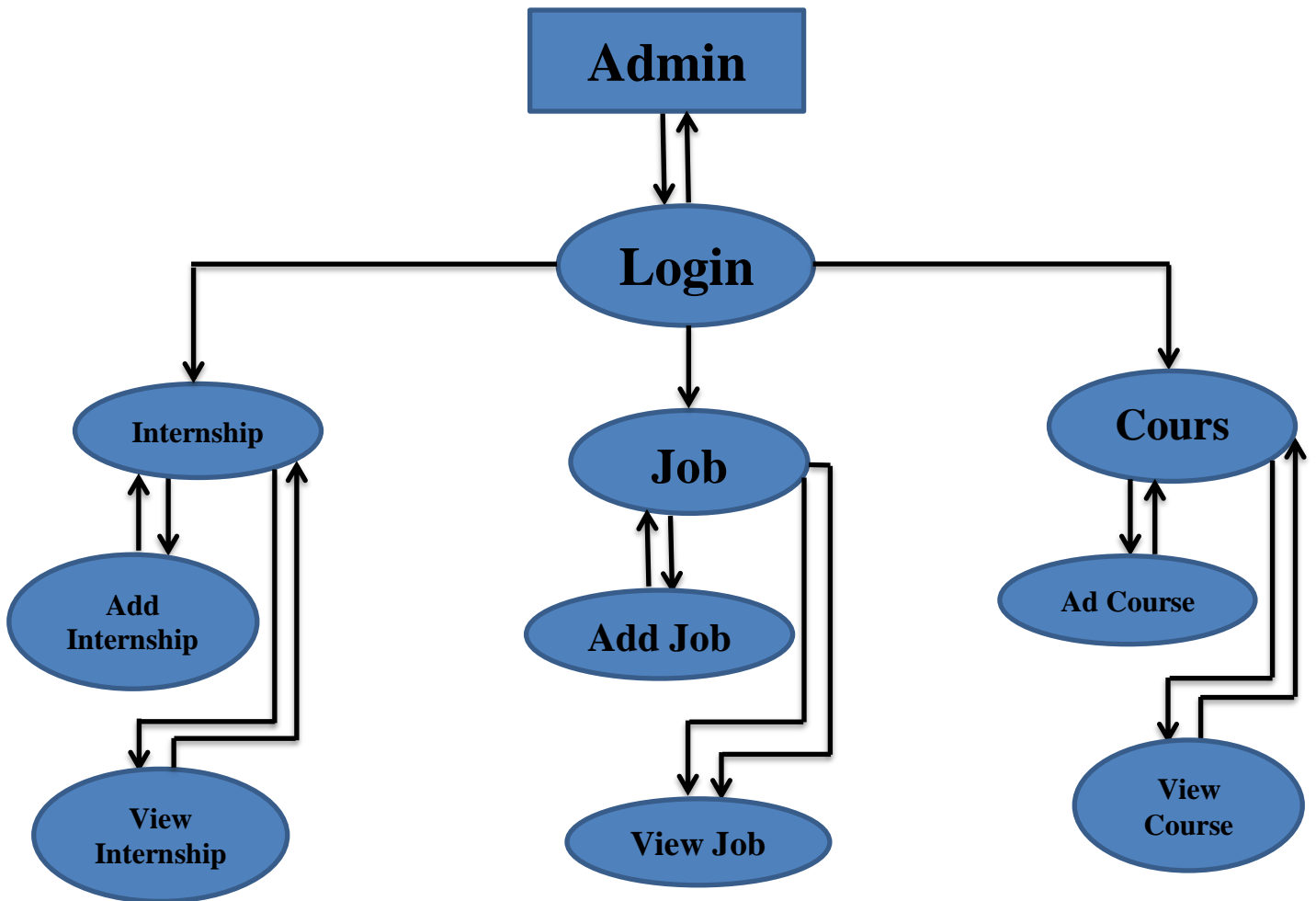
4a. DATA FLOW DIAGRAM





Level-1 Diagram

4b. ER-DIAGRAM



4c. DATABASE DESIGN

A database is an organized mechanism that has capability of storing information through which a user can retrieve stored information in an effective and efficient manner. The data is the purpose of any database and must be protected.

The database design is two level processes. In the first step, user requirements are gathered together and a database is designed which will meet these requirements as clearly as possible. This step is called information Level design and it is taken independent of any individual DBMS.

4d. DATA DICTIONARY

The screenshot shows the Django administration interface in a Google Chrome browser. The address bar indicates the URL is `takeuforward.com:3000/admin/`. The page title is "Django administration" and the user is logged in as "DEEP".

Site administration

APPLICATION

APPLICATION	Actions
Carts	+ Add Change
Contact uss	+ Add Change
Course boughts	+ Add Change
Courses	+ Add Change
Customers	+ Add Change
Internships	+ Add Change
Internship_applys	+ Add Change
Job_displays	+ Add Change
Jobs	+ Add Change

AUTHENTICATION AND AUTHORIZATION

APPLICATION	Actions
Groups	+ Add Change
Users	+ Add Change

PYTHON SOCIAL AUTH

APPLICATION	Actions
Associations	+ Add Change
Nonces	+ Add Change
User social auths	+ Add Change

Recent actions

My actions

- [+ Job object \(5\)](#)
Job
- [+ Job object \(4\)](#)
Job
- [+ Job object \(3\)](#)
Job
- [Job object \(2\)](#)
Job
- [+ Job object \(2\)](#)
Job
- [+ Job object \(1\)](#)
Job
- [X Cart object \(2\)](#)
Cart
- [X Cart object \(4\)](#)
Cart
- [X Cart object \(5\)](#)
Cart
- [X Cart object \(6\)](#)
Cart

5a. USER INTERFACE DESIGN

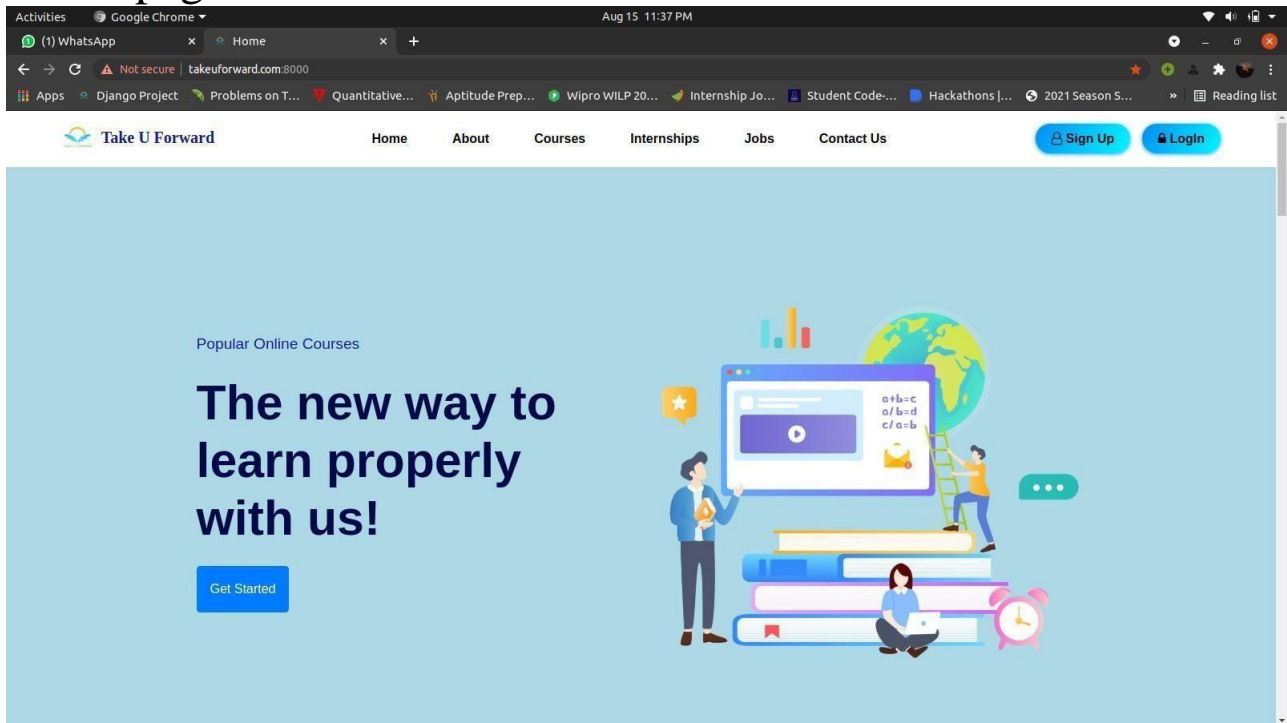
User interface design (UID) or user interface engineering is the design of user interfaces for machines and software, such as computers, home appliances, mobile devices, and other electronic devices, with the focus on maximizing the user experience. The goal of user interface design is to make the user's interaction as simple and efficient as possible, in terms of accomplishing user goals (user-centered design).

Good user interface design facilitates finishing the task at hand without drawing unnecessary attention to it. Graphic design and typography are utilized to support its usability, influencing how the user perform certain interactions and improving the aesthetic appeal of the design; design aesthetics may enhance or detract from the ability of users to use the functions of the interface. The design process must balance technical functionality and visual elements (e.g., mental model) to create a system that is not only operational but also usable and adaptable to changing user needs.

Interface design is involved in a wide range of projects from computer systems, to cars, to commercial planes; all of these projects involve much of the same basic human interactions yet also require some unique skills and knowledge. As a result, designers tend to specialize in certain types of projects and have skills centered on their expertise, whether that be software design, user research, web design, or industrial design.

5b. SNAPSHOTS

Home page



Registration page

The screenshot shows the registration page of the 'Take U Forward' website. The browser's address bar displays 'takeuforward.com:8000/singin/'. The website's navigation bar is consistent with the home page. The registration form is centered on the page and includes the following fields:

- Username: Enter Username
- First name: Enter First Name
- Last name: Enter Last Name
- Email address: Enter Email
- Password: Enter Password
- Confirm Password: Confirm Password

Below the form, there is a link: 'already have an account? Login Account'. A 'SignUp' button is located at the bottom of the form.

LogIn

Take U Forward

Home About Courses Internships Jobs Contact Us

Sign Up Login

Username:

Password:

[Forgot password?](#)

[don't have an account? Create Account](#)

SignUp

Or

Login with facebook

Login with Google

Login with Google

User Profile

Take U Forward

Home About Courses Internships Jobs Contact Us

deep99

Edit Profile

About Courses Internship Jobs

UserName: deep99

Name: Souvik Das

Email: acharya@gmail.com

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DURATION: 6 Months
STIPEND: ₹ 4000 /month
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Internship Part time Allowed
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Ahmedabad, Gandhinagar, Rajkot, Vadodara
START DATE: Immediately
DURATION: 4 Months
STIPEND: ₹ 12000 /month
APPLY BY: 21 Aug '21

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Chennai 13 Oct 21

Micromen Software Solutions Private Limited

View & Apply

Full Time Offer

Front End Developer

Full Time Offer

Python Developer

https://takeuforward.com:8000/login

Contact Us Page

Take U Forward

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First name*

Enter First Name

Last name*

Enter Second Name

Email address*

Enter Email Address

Phone*

Enter Phone Number

Message:

Enter the message

submit

https://takeuforward.com:8000/contact/

IMPLEMENTATION & TESTING

SOURCE CODE

https://github.com/Unknown-lad-2/E_Learning_Project

6. IMPLEMENTATION AND TESTING

A software system test plan is a document that describes the objectives, scope, approach and focus of software testing effort. The process of preparing a test plan is a usual way to think the efforts needed to validate the acceptability of a software product. The complete document will help people outside the test group understand the "WHY" and "HOW" product validation. It should be thorough enough to be useful but not so thorough that no one outside the test group will read it.

6a. INTRODUCTION

Testing is the process of running a system with the intention of finding errors. Testing enhances the integrity of a system by detecting deviations in design and errors in the system. Testing aims at detecting error-prone areas. This helps in the prevention of errors in a system. Testing also adds value to the product by conforming to the user requirements.

The main purpose of testing is to detect errors and error-prone areas in a system. Testing must be thorough and well-planned. A partially tested system is as bad as an untested system. And the price of an untested and under-tested system is high.

The implementation is the final and important phase. It involves user-training, system testing in order to ensure successful running of the proposed system. The user tests the system and changes are made according to their needs. The testing involves the testing of the developed system using various kinds of data. While testing, errors are noted and correctness is the mode.

6b. OBJECTIVES OF TESTING

The objective our test plan is to find and report as many bugs as possible to improve the integrity of our program. Although exhaustive testing is not possible, we will exercise a broad range of tests to achieve our goal. Our user interface to utilize these functions is designed to be user-friendly and provide easy manipulation of the tree. The application will only be used as a demonstration tool, but we would like to ensure that it could be run from a variety of platforms with little impact on performance or usability.

Process Overview

The following represents the overall flow of the testing process:

1. Identify the requirements to be tested. All test cases shall be derived using the current Program Specification.
2. Identify which particular test(s) will be used to test each module.
3. Review the test data and test cases to ensure that the unit has been thoroughly verified and that the test data and test cases are adequate to verify proper operation of the unit.
4. Identify the expected results for each test.
5. Document the test case configuration, test data, and expected results.
6. Perform the test(s).
7. Document the test data, test cases, and test configuration used during the testing process. This information shall be submitted via the Unit/System Test Report (STR).
8. Successful unit testing is required before the unit is eligible for component integration/system testing.

9. Unsuccessful testing requires a Bug Report Form to be generated. This document shall describe the test case, the problem encountered, it's possible cause, and the sequence of events that led to the problem. It shall be used as a basis for later technical analysis.
10. Test documents and reports shall be submitted. Any specifications to be reviewed, revised, or updated shall be handled immediately.

6c. TEST CASES

A test case is a document that describe an input, action, or event and expected response, to determine if a feature of an application is working correctly. A test case should contain particular such as test case identifier, test condition, input data.

Requirement expected results. The process of developing test cases can help find problems in the requirement or design of an application, since it requires completely thinking through the operation of the application.

TESTING STEPS

Unit Testing:

Unit testing focuses efforts on the smallest unit of software design. This is known as module testing. The modules are tested separately. The test is carried out during programming stage itself. In this step, each module is found to be working satisfactory as regards to the expected output from the module.

Integration Testing:

Data can be lost across an interface. One module can have an adverse effect on another, sub functions, when combined, may not be linked in desired manner in major functions. Integration testing is a systematic approach for constructing the program structure, while at the same time conducting test to uncover errors associated within the interface. The objective is to take unit tested modules and builds program structure. All the modules are combined and tested as a whole.

Validation:

At the culmination of the integration testing, Software is completely assembled as a package. Interfacing errors have been uncovered and

corrected and a final series of software test begin in validation testing. Validation testing can be defined in many ways, but a simple definition is that the validation succeeds when the software functions in a manner that is expected by the customer. After validation test has been conducted, one of the three possible conditions exists.

- a) The function or performance characteristics confirm to specification and are accepted.
- b) A deviation from specification is uncovered and a deficiency lists is created.
- c) Proposed system under consideration has been tested by using validation test and found to be working satisfactory.

6d. INTEGRATION TEST REPORTS

Software testing is always used in association with verification and validation. In the testing phase of this project our aim is to find the answer to following two questions.

- Whether the software matches with the specification (i.e. process base) to verify the product.
- Whether this software in one client what wants (i.e. product base) to validate the product.

Unit testing and integration testing has been carried out to find the answer to above questions. In unit testing each individual module was test to find any unexpected behaviour if exists. Later all the module was integrated and flat file was generated.

FUNCTIONAL TESTING

These are the points concerned during the stress test:

- Nominal input: character is in putted in the place of digits and the system has to flash the message "Data error"

- Boundary value analysis: exhaustive test cases have designed to create an output report that produces the maximum (and minimum) allowable number of table entries.

Testing Method Used

We have adopted a testing method which is a mix of both (structural) and black box (functional) testing. For modules we have adopted white box testing. Then we integrated the module into sub - systems and further into the system. These we adopted black box testing for checking the correctness of the system.

Requirements Validated and Verified:

- • The data is getting entered properly into database.
- • The Screens are being loaded correctly
- • The Various functions specified are being performed completely.

7a. DATABASE SECURITY

What is database security?

Database security encompasses a range of security controls designed to protect the Database Management System (DBMS). The types of database security measures your business should use include protecting the underlying infrastructure that houses the database such as the network and servers), securely configuring the DBMS, and the access to the data itself.

Database security controls

Database security encompasses multiple controls, including system hardening, access, DBMS configuration, and security monitoring. These different security controls help to manage the circumventing of security protocols.

System hardening and monitoring

The underlying architecture provides additional access to the DBMS. It is vital that all systems are patched consistently, hardened using known security configuration standards, and monitored for access, including insider threats.

DBMS configuration

It is critical that the DBMS be properly configured and hardened to take advantage of security features and limit privileged access that may cause a misconfiguration of expected security settings. Monitoring the DBMS configuration and ensuring proper change control processes helps ensure that the configuration stays consistent.

Authentication

Database security measures include authentication, the process of verifying if a user's credentials match those stored in your database, and permitting only authenticated users access to your data, networks, and database platform.

Access

A primary outcome of database security is the effective limitation of access to your data. Access controls authenticate legitimate users and

applications, limiting what they can access in your database. Access includes designing and granting appropriate user attributes and roles and limiting administrative privileges.

Database auditing

Monitoring (or auditing) actions as part of a database security protocol delivers centralized oversight of your database. Auditing helps to detect, deter, and reduce the overall impact of unauthorized access to your DBMS.

Application security

Database and application security framework measures can help protect against common known attacker exploits that can circumvent access controls, including SQL injection.

Why is database security important?

Safeguarding the data your company collects and manages is of utmost importance. Database security can guard against a compromise of your database, which can lead to financial loss, reputation damage, consumer confidence disintegration, brand erosion, and non-compliance of government and industry regulation.

Database security safeguards defend against a myriad of security threats and can help protect your enterprise from:

- ◆ Deployment failure
- ◆ Excessive privileges
- ◆ Privilege abuse
- ◆ Platform vulnerabilities
- ◆ Unmanaged sensitive data
- ◆ Backup data exposure
- ◆ Weak authentication
- ◆ Database injection attacks

7b. SYSTEM SECURITY

The key focus of system security unit is on enabling students to develop practical and working tactics to achieve digital security. In this unit, students will learn operational system security, the security of databases and servers and various aspects including design, implementation, and configuration in order to apply security measures and principles to protect these systems. Students will explore the framework of cyber security and safety principles and guidelines and the various tools used to enforce security and privacy

Some of the key points to be noticed:-

Network & system security

Network protection procedures — such as network segregation using VLANs, firewall, router technologies, intrusion detection, prevention systems, centralized log aggregation, and alert mechanisms — should be standard for your software provider. All these systems should be overseen by dedicated and experienced security teams.

Application security

Application security encompasses all the features within the application that help ensure your project data stays safe. These features fall into five categories:

- User authentication
- Data sharing & role-based access control
- Monitoring user activities
- Project management software data encryption
- Mobile applications

If we talk about the system security in our proposed system we have implemented with the help of maintain the session throughout the system's use. Once a user has logged out than he/she will not be able to perform any task before signing backagain.

A high level of authentic login is given to the system so this is a very tedious task to enter without authorization and authentication.

Privacy

When contacting customer support, it's important to know that your vendor has strict policies on how to verify your identity and help you access your account, as well as how and when they can access your data.

Ask vendors to share their policies around escalation, management, knowledge sharing, risk management, and day- to-day operations. They should have strict policies to limit access to customer data to employees with a job-related need.

Compliance

There are security compliance standards that any reputable software vendor should adhere to. These include:

- ◆ ISO/IEC 27001:2013 certification
- ◆ SOC2 Type II
- ◆ ISAE 3402 (Europe)

7c. LIMITATIONS

- ✓ Since it is an online project, customers need internet connection to use it.
- ✓ People who are not familiar with computers can't use this software.
- ✓ Customer google or social media account to create their account to log In directly.

8.

CONCLUSION

This project has been appreciated by all the users in the organization. It is easy to use, since it uses the GUI provided in the user dialog. User friendly screens are provided. The usage of software increases the efficiency, decreases the effort. It has been efficiently employed as a Site management. It is quite handy to use for every users across the globe.

9. FUTURE SCOPE & FURTHER ENHANCEMENT

In future we would like to keep working on this project and make new additions to provide users with more advanced features and more detailed information. We have set our sights on the following additions in future:-

1. User Profile would be more dynamic
2. Online payment process through debit and credit cards.
3. Auto mail will be sent to the student's email-id when new admission takes place.
4. Courses will be uploaded in this platform and taught by our Instructors
5. Jobs will applied directly to company's official page through APIs
6. Internships will be collaborated will Internshala to apply internships

10. BIBLIOGRAPHY

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