KASC FACULTY LEAVE MANAGEMENT

A Project Report Submitted to the Thiruvalluvar University
in partial fulfilment of the degree of

BACHELOR OF COMPUTER SCIENCE

SUBMITTED BY

DASHWIN P	**Reg. No. 24520U18009**
JAUSH JEBARSON R	**Reg. No. 24520U18018**
KAVIN E	**Reg. No. 24520U18021**
PACHAYAPPAN M	**Reg. No. 24520U18031**
SHEWAG S	**Reg.No. 24520U18037**

Under the Group Project Guidance Of
Ms. S.KEERTHIGA, MCA.,

Assistant Professor, Department of Computer Science,

Karan Arts and Science College (Co-Ed), Tiruvannamalai – 606 603.

DEPARTMENT OF COMPUTER SCIENCE,

KARAN ARTS AND SCIENCE COLLEGE (Co-Ed)

Thenmathur, Tiruvannamalai – 606603.

MAY 2023

CERTIFICATE

CERTIFICATE

This is to certify that dissertation entitled

KASC FACULTY LEAVE MANAGEMENT

Submitted By

DASHWIN P	**Reg. No. 24520U18009**
JAUSH JEBARSON R	**Reg. No. 24520U18018**
KAVIN E	**Reg. No. 24520U18021**
PACHAYAPPAN M	**Reg. No. 24520U18031**
SHEWAG S	**Reg.No. 24520U18037**

Is a bonafide record to project guidance and supervision for the partial fulfillment of **Bachelor of Computer Science** Degree in the **Department of B.Sc Computer Science**, **KARAN ARTS AND SCIENCE COLLEGE (Co-Ed**) Tiruvannamalai Affiliated to Thiruvalluvar University, Vellore.

We Further certify this work has not previously formed the basis of award the candidate of Any degree diploma, associate fellowship and any other similar title.

INTERNAL GUIDE   **HEAD OF DEPARTMENT**

INTERNAL EXAMINER   **PRINCIPAL**   **EXTERNAL EXAMINER**

Ref.No.   2021/0036/LB

Date: 04-05-2023

TO WHOM IT MAY CONCERN

This is to certify that Mr.Kavin E, Mr.Dashwin P, Mr.Jaush Jebarson R, Mr.Pachayappan M and Mr.Shewag S are the students of Bachelor of Computer Science, BSSS COLLEGE BHOPAL, has successfully completed his 45 days internship programme [from 10 February 2023 to 04 May 2023] at this company light boat signage system & Electronics Pvt. Ltd.) On PHP PROGRAMMING PROJECT (Online leave management system) during the period of his internship programme they were found punctual, hardworking, and inquisitive.

We wish him every success in life.

For,
LIGHTBOAT SIGNAGES SYSTEMS & ELECTRONICS PVT. LTD.

Authorized Signatory

LIGHTBOAT SIGNAGE SYSTEMS & ELECTRONICS PVT LTD
F-1, 5A Novelty Tower JK Road, Bhopal, Madhya Pradesh Ph: +91-9329777640

ACKNOWLEDGEMENT

ACKNOWLEDGEMENT

We extend our heartily thanks to our Chairman **Mr. E.V. KUMARAN**, blessing and inspiration that We have completed this project successfully.

We heartily express Our thanks to **Director Mr. PON.MUTHU,** for this Blessing and encouraging us to do the project.

We extremely thankful to **Dr. A. MURUGANANTHAM MCA., M.Sc., M.Phil., Ph.D..** Principal who has given the official permission for doing the project.

We extremely thankful to **Mrs. A.R. SANGEETHA M.Sc., M.Phil., B Ed., Head of the Department**, Computer Science for Permitting us to do the project.

We heartily express our thanks to our faculty **Ms. S.KEERTHIGA, MCA.,** Assistant Professor in B.Sc Computer Science, facilities to do my project work and also for valuable guidance and suggestions by which the report might have taken final shape.

We thank to Honorable **Faculty Members** and **Friends** of the **Department of Computer Science** for their encouragement and support.

We heartfulyl thanking to all the teaching and non-teaching staffs of **KARAN ARTS AND SCIENCE COLLEGE**, who helped us to complete our entire project work successfully.

We extend heartily thanks to our **FAMILY MEMBERS** blessings and inspirations that We have completed this project successfully.

DECLARATION

DECLARATION

We hereby declare that this work entitled, **"KASC FACULTY LEAVE MANAGEMENT"** Submitted for the Thiruvalluvar university Vellore in partial fulfilment of requirements for award the B.Sc Computer Science, degree in the bonafide record of work done by us under the supervision of **Ms. S.KEERTHIGA, MCA.,** Assistant Professor of Department of Computer Science**, KARAN ARTS AND SCIENCE COLLEGE (CO-ED), Tiruvannamalai.**

To the best of my knowledge the work reported these in does not form part any other Thesis on the basis of which **B.sc Computer Science** or awarded was conferred on an earlier occasion this or any other candidate

Register Number	Name	Signature
24520U18009	DASHWIN P	
24520U18018	JAUSH JEBARSON R	
24520U18021	KAVIN E	
24520U18031	PACHAYAPPAN M	
24520U18037	SHEWAG S	

Place : Tiruvannamalai

Date :

ABSTRACT

ABSTRACT

This project is aimed at developing a web based Leave Management Tool, which is specifically important for Our college. The One who acts as a Admin is mostly responsible for managing and granting leave request. To this end, most institution used conventional method of requesting, granting and managing leave. In conventional method, leave is manually request by writing letter to head of department. The head of department analyze it and as the hod wish the request may get approval or it get rejected. This method is time consuming, require more paper work and difficult to manage. Hence the need for an web based leave management system that is faster, error free, less paper work and easy to manage There are registered people in the system. Some are approvers. An approver can also be a requestor. In our college, it could be the Head of the Department/Advisor/Principal etc.

CONTENT

CONTENT

INTRODUCTION

INTRODUCTION TO THE PROJECT:

The Easy Leave is an Intranet based application that can be accessed throughout the organization or a specified group/Dept. This system can be used to automate the workflow of leave applications and their approvals. The periodic crediting of leave is also automated. There are features like email notifications, cancellation of leave, automatic approval of leave, report generators etc in this Tool.

The project has been planned to be having the view of distributed architecture, with centralized storage of the database. The application for the storage of the data has been planned. Using the constructs of MS-SQL Server and all the user interfaces have been designed using the ASP.Net technologies. The database connectivity is planned using the "SQL Connection" methodology. The standards of security and data protective mechanism have been given a big choice for proper usage. The application takes care of different modules and their associated reports, which are produced as per the applicable strategies and standards that are put forwarded by the administrative staff.

PURPOSE OF THE PROJECT:

This project is aimed at developing a web based leaves management tool which is of importance to either an organization or a college. This is an intranet based application that can be accessed throughout the organization or a specified group or department. This system can be used to automate the workflow of leave application and their approvals. It provide an easy way to apply for a leave. For apply for a leave an Faculty simply login to their account by using their login password and apply for leave. All the Faculty must have to provide a reason for the approval of leave. The status of their leave is also display on Faculty account.

PROBLEM IN THE EXISTING SYSTEM:

- Cannot Upload and Download the latest updates.
- No use of Web Services and Remoting.
- Risk of mismanagement and of data when the project is under development.
- Less Security.
- No proper coordination between different Applications and Users.
- Fewer user friendly.

SOLUTION OF THESE PROBLEM:

The development of the new system contains the following activities, which try to automate the entire process keeping in view of the database integration approach.

1. User friendliness is provided in the application with various controls.
2. The system makes the overall project management much easier and flexible.
3. Readily upload the latest updates, allows user to download the alerts by clicking the URL.
4. There is no risk of data mismanagement at any level while the project development is under process.
5. It provides high level of security with different level of authentication.

SYSTEM ANALYSIS

SYSTEM ANALYSIS

ANALYSIS MODEL:-

The model that is basically being followed is the WATER FALL MODEL, which states that the phases are organized in a linear order. First of all the feasibility study is done. Once that part is over the requirement analysis and project planning begins. If system exists one and modification and addition of new module is needed, analysis of present system can be used as basic model.

The design starts after the requirement analysis is complete and the coding begins after the design is complete. Once the programming is completed, the testing is done. In this model the sequence of activities performed in a software development project are: -

- · Requirement Analysis
- · Project Planning
- · System design
- · Detail design
- · Coding
- · Unit testing
- · System integration & testing

Here the linear ordering of these activities is critical. End of the phase and the output of one phase is the input of other phase. The output of each phase is to be consistent with the overall requirement of the system. Some of the qualities of spiral model are also incorporated like after the people concerned with the project review completion of each of the phase the work done.

WATER FALL MODEL fig 1.1 was being chosen because all requirements were known beforehand and the objective of our software development is the computerization/automation of an already existing manual working system.
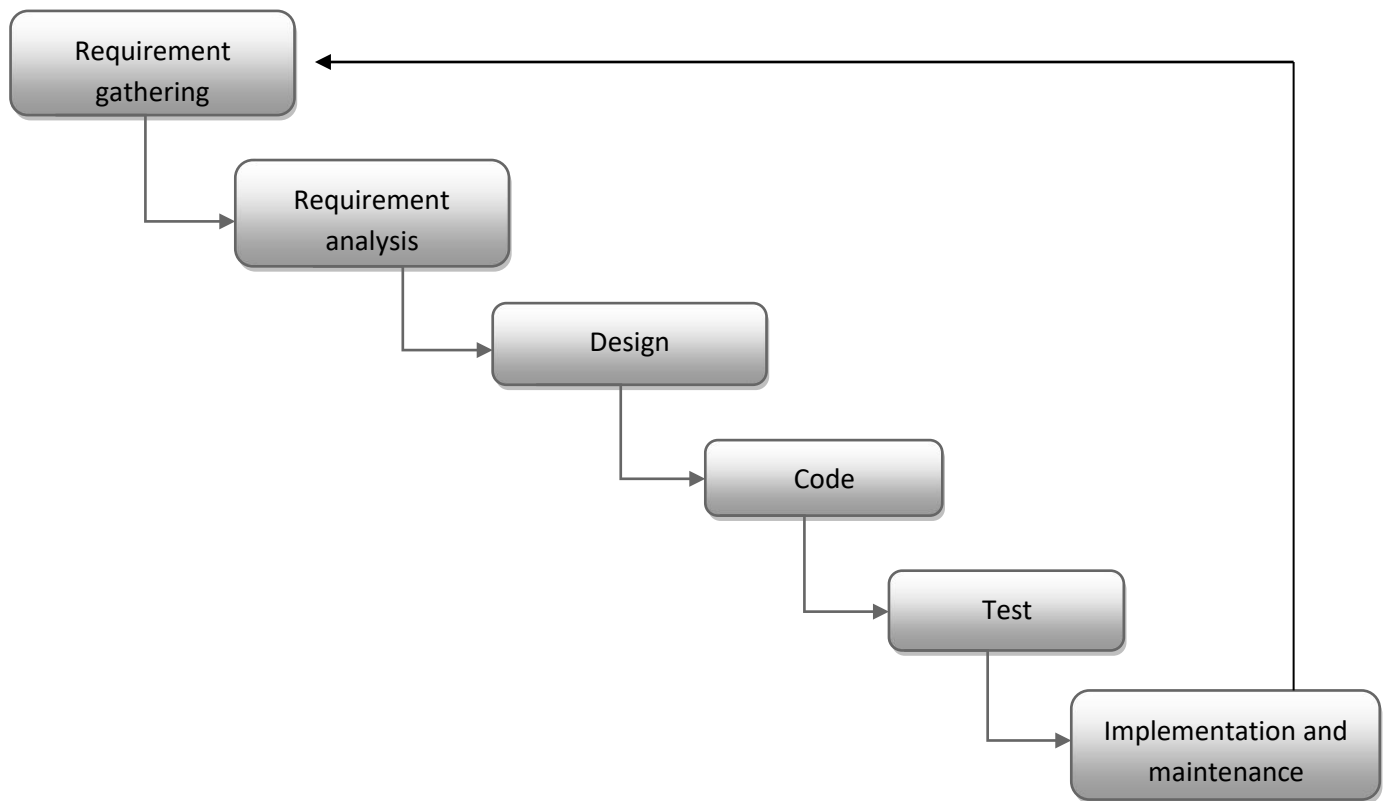
Fig 1.1:Water fall model

STUDY OF THE SYSTEM (requirement gathering):-

In the flexibility of the uses the interface has been developed a graphics concept in mind, associated through a browses interface. The GUI'S at the top level have been categorized as

1. Administrative user interface
2. The operational or generic user interface

The administrative user interface concentrates on the consistent information that is practically, part of the organizational activities and which needs proper authentication for the data collection. The interfaces help the administrations with all the transactional states like Data insertion, Data deletion and Date updation along with the extensive data search capabilities.

The operational or generic user interface helps the users upon the system in transactions through the existing data and required services. The operational user interface also helps the ordinary users in managing their own information helps the ordinary users in managing their own information in a customized manner as per the assisted flexibilities.

NUMBER OF MODULES:-

The system after careful analysis has been identified to be presented with the following modules:

The modules involved are**:**

  - Administration
  - Faculty
  - Search
  - Report
  - Authentication

Administrator:

In this module the Administrator has the privileges to add all the Facultys and register them in the organization and check the information of the Faculty and check the status of the leave when they have taken and what type of leave they have taken and search is done based on the Faculty and report is generated based on Faculty.

Search:

This module contain complete search like Leave search, Type of Leave, Faculty based on the leave and starting and ending day of leave.

Faculty:

In this module Faculty has the privileges to use his username and password for login and he can see the request given by the customer and he can pass the process to the Business Manager and maintain the record of the customers.

Reports:

This module contains all the information about the reports generated by the Facultys based on the Performance and by the leave status.

Authentication:

This module contains all the information about the authenticated user. User without his username and password can't enter into the login if he is only the authenticated user then he can enter to his login.

PROJECT INSTRUCTIONS:-

- Based on the given requirements, conceptualize the Solution Architecture. Choose the domain of your interest otherwise develop the application for ultimatedotnet.com. Depict the various architectural components, show interactions and connectedness and show internal and external elements. Design the web services, web methods and database infrastructure needed both and client and server.

- Provide an environment for upgradation of application for newer versions that are available in the same domain as web service target˙

HARDWARE REQUIREMENTS:

- PIV 2.8 GHz Processor and Above
- RAM 512MB and Above
- HDD 20 GB Hard Disk Space and Above

SOFTWARE REQUIREMENTS:

- WINDOWS OS (XP / 2000 / 200 Server / 2003 Server)
- Visual Studio .Net 2005 Enterprise Edition
- XAMPP Server 5.0
- Visual Studio .Net Framework (Minimal for Deployment)
- SQL Server 2000 Enterprise Edition

INPUT AND OUTPUT:-

The main inputs, outputs and major functions of the system are as follows

Inputs:

- Admin enters his or her user id and password.
- Faculty enter his or her user id and password.
- Faculty send request for Leave.
- Faculty can check for status for Leave.
- Admin can edit the Faculty details and so on..

Outputs:

- Admin gets his homepage.
- Faculty get his homepage.
- Faculty leave request data will be stored in database..
- Displays leave Status.
- Admin view Faculty details.

FEASIBILITY REPORT

Feasibility Report

There are aspects in the feasibility study portion of the preliminary investigation:

- Technical Feasibility
- Operation Feasibility
- Economical Feasibility

1. Technical Feasibility :

The technical issue usually raised during the feasibility stage of the investigation includes the following:

- Does the necessary technology exist to do what is suggested?
- Do the proposed equipments have the technical capacity to hold the data required to use the new system?
- Will the proposed system provide adequate response to inquiries, regardless of the number or location of users?
- Can the system be upgraded if developed?
- Are there technical guarantees of accuracy, reliability, ease of access and data security?

Earlier no system existed to cater to the needs of 'Secure Infrastructure Implementation System'. The current system developed is technically feasible. It is a web based user interface. Thus it provides an easy access to the users. The database's purpose is to create, establish and maintain a workflow among various entities in order to facilitate all concerned users in their various capacities or roles. Permission to the users would be granted based on the roles specified. Therefore, it provides the technical guarantee of accuracy, reliability and security. The

software and hard requirements for the development of this project are not many and are available as free as open source. The work for the project is done with the current equipment and existing software technology. Necessary bandwidth exists for providing a fast feedback to the users irrespective of the number of users using the system.

2. **Operational Feasibility:**

Proposed projects are beneficial only if they can be turned out into information system. That will meet the organization's operating requirements. Operational feasibility aspects of the project are to be taken as an important part of the project implementation. Some of the important issues raised are to test the operational feasibility of a project includes the following: -

• Is there sufficient support for the management from the users?
• Will the system be used and work properly if it is being developed and implemented?
• Will there be any resistance from the user that will undermine the possible application benefits?

This system is targeted to be in accordance with the above-mentioned issues. Beforehand, the management issues and user requirements have been taken into consideration. So there is no question of resistance from the users that can undermine the possible application benefits.

The well-planned design would ensure the optimal utilization of the computer resources and would help in the improvement of performance status.

3. **Economic Feasibility:**

A system can be developed technically and that will be used if installed must still be a good investment for the organization. In the economical feasibility, the development cost in creating the system is evaluated against the ultimate benefit derived from the new systems. Financial benefits must equal or exceed the costs.

The system is economically feasible. It does not require any addition hardware or software. Since the interface for this system is developed using the existing resources and technologies. There is nominal expenditure and economical feasibility for certain.

SOFTWARE REQUIREMENT SPECIFICATION(SRS)

SOFTWARE REQUIREMENT SPECIFICATION(SRS)

Purpose: The main purpose for preparing this document is to give a general insight into the analysis and requirements of the existing system or situation and for determining the operating characteristics of the system.

Scope: This Document plays a vital role in the development life cycle (SDLC) and it describes the complete requirement of the system. It is meant for use by the developers and will be the basic during testing phase. Any changes made to the requirements in the future will have to go through formal change approval process.

DEVELOPERS RESPONSIBILITIES OVERVIEW:-

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 the 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.
- Maintaining the system for a period of one year after installation.

FUNCTIONAL REQUIREMENTS:-

OUTPUT DESIGN:

Outputs from computer systems are required primarily to communicate the results of processing to users. They are also used to provides a permanent copy of the results for later consultation. The various types of outputs in general are:

- External Outputs, whose destination is outside the organization.
- Internal Outputs whose destination is with in organization and they are the ☐ User's main interface with the computer.
- Operational outputs whose use is purely with in the computer department.
- Interface outputs, which involve the user in communicating directly with

OUTPUT DEFINITION:

The outputs should be defined in terms of the following points:

- Type of the output
- Content of the output
- Format of the output
- Location of the output
- Frequency of the output
- Volume of the output
- Sequence of the output

Output Media:

In the next stage it is to be decided that which medium is the most appropriate for the output. The main considerations when deciding about the output media are:

- The suitability for the device to the particular application.
- The need for a hard copy.
- The response time required.
- The location of the users
- The software and hardware available.

Keeping in view the above description the project is to have outputs mainly coming under the category of internal outputs. The main outputs desired according to the requirement specification are:

The outputs were needed to be generated as a hot copy and as well as queries to be viewed on the screen. Keeping in view these outputs, the format for the output is taken from the outputs, which are currently being obtained after manual processing. The standard printer is to be used as output media for hard copies.

INPUT DESIGN:

Input design is a part of overall system design. The main objective during the input design is as given below:

- To produce a cost-effective method of input.
- To achive the highest possible level of accuracy.
- To ensure that the input is acceptable and understood by the user.
- The e-mail id should be unique.
- Password must be the combination of character, symbol and numbers.
- The password must be unique.

INPUT STAGES:

The main input stages can be listed as below:

- Data recording

- Data transcription

- Data conversion

- Data verification

- Data control

- Data transmission

- Data validation

- Data correction

INPUT TYPES:

It is necessary to determine the various types of inputs. Inputs can be categorized as follows:

- External inputs, which are prime inputs for the system.

- Internal inputs, which are user communications with the system.

- Operational, which are computer department's communications to the system?

- Interactive, which are inputs entered during a dialogue.

INPUT MEDIA:

At this stage choice has to be made about the input media. To conclude about the input media consideration has to be given to;

- Type of input

- Flexibility of format

- Speed

- Accuracy

- Verification methods

- Rejection rates

- Ease of correction

- Storage and handling requirements

- Security

- Easy to use

- Portability

Keeping in view the above description of the input types and input media, it can be said that most of the inputs are of the form of internal and interactive. As

Input data is to be the directly keyed in by the user, the keyboard can be considered to be the most suitable input device.

ERROR AVOIDANCE:

At this stage care is to be taken to ensure that input data remains accurate form the stage at which it is recorded upto the stage in which the data is accepted by the system. This can be achieved only by means of careful control each time the data is handled.

ERROR DETECTION:

Even though every effort is make to avoid the occurrence of errors, still a small proportion of errors is always likely to occur, these types of errors can be discovered by using validations to check the input data.

DATA VALIDATION:

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

USER INTERFACE DESIGN:-

It is essential to consult the system users and discuss their needs while designing the user interface:

USER INTERFACE SYSTEMS CAN BE BROADLY CLASIFIED AS:

1. User initiated interface the user is in charge, controlling the progress of the user/computer dialogue. In the computer-initiated interface, the computer selects the next stage in the interaction.
2. Computer initiated interfaces

In the computer initiated interfaces the computer guides the progress of the user/computer dialogue. Information is displayed and the user response of the computer takes action or displays further information.

USER_INITIATED INTERGFACES:

User initiated interfaces fall into tow approximate classes:

1. Command driven interfaces: In this type of interface the user inputs commands or queries which are interpreted by the computer.
2. Forms oriented interface: The user calls up an image of the form to his/her screen and fills in the form. The forms oriented interface is chosen because it is the best choice.

COMPUTER-INITIATED INTERFACES:

The following computer – initiated interfaces were used:

1. The menu system for the user is presented with a list of alternatives and the user chooses one; of alternatives.
2. Questions – answer type dialog system where the computer asks question and takes action based on the basis of the users reply.

Right from the start the system is going to be menu driven, the opening menu displays the available options. Choosing one option gives another popup menu with more options. In this way every option leads the users to data entry form where the user can key in the data.

ERROR MESSAGE DESIGN:

The design of error messages is an important part of the user interface design. As user is bound to commit some errors or other while designing a system the system should be designed to be helpful by providing the user with information regarding the error he/she has committed.

This application must be able to produce output at different modules for different inputs.

PERFORMANCE REQUIREMENTS:

Performance is measured in terms of the output provided by the application.

Requirement specification plays an important part in the analysis of a system. Only when the requirement specifications are properly given, it is possible to design a system, which will fit into required environment. It rests largely in the part of the users of the existing system to give the requirement specifications because they are the people who finally use the system. This is because the requirements have to be known during the initial stages so that the system can be designed according to those requirements. It is very difficult to change the system once it has been designed and on the other hand designing a system, which does not cater to the requirements of the user, is of no use.

The requirement specification for any system can be broadly stated as given below:

- The system should be able to interface with the existing system
- The system should be accurate
- The system should be better than the existing system

The existing system is completely dependent on the user to perform all the duties.

SYSTEM DESIGN

SYSTEM DESIGN

E – R DIAGRAMS:-

- The relation upon the system is structure through a conceptual ER diagram which not only specifics the existential entities but also the standard relation through which the system exists and the cardinalities that are necessary for the system state to continue.

- The entity relationship diagram depicts the relationship between the data objects. The entity relationship is the notation that is used to conduct the data modeling activity the attribute of each data object noted is the ERD can be described resign a data object description.

The set of primary components that are identified by the ERD are:-

   a. Data object

   b. attribute

   c. Relationships

   d. various type of indicators.
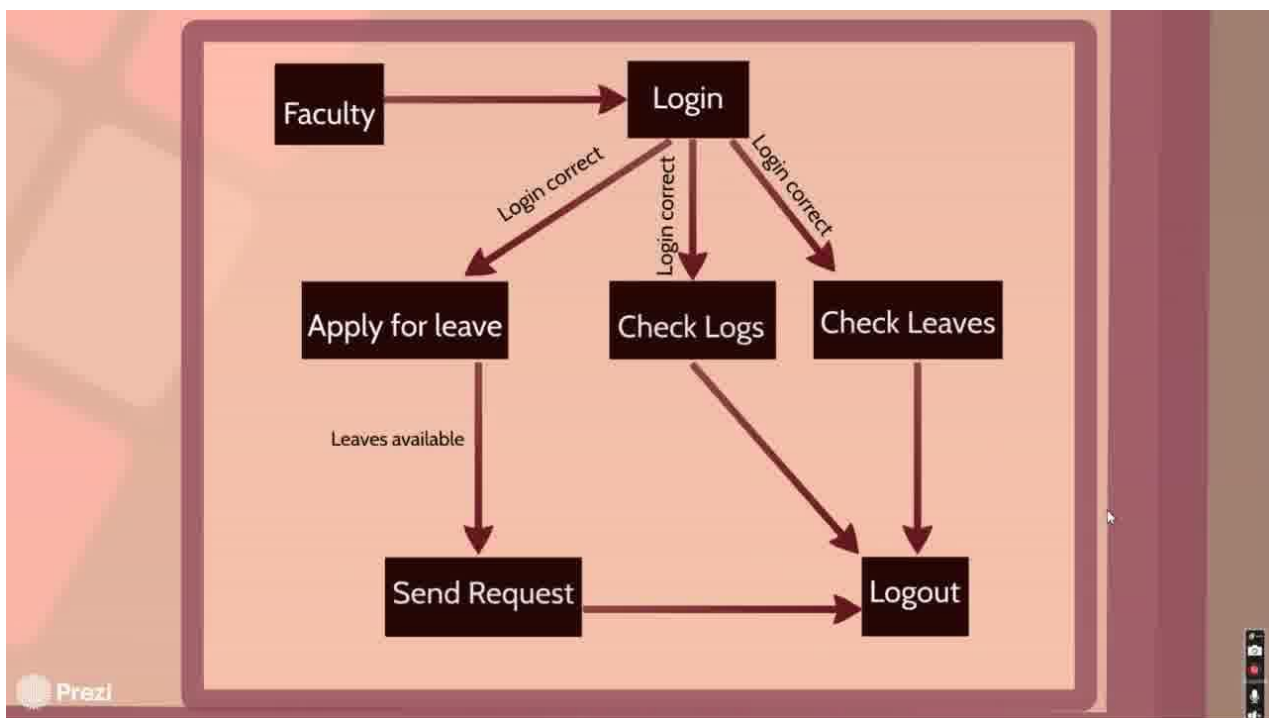
DATA FLOW DIAGRAM:-
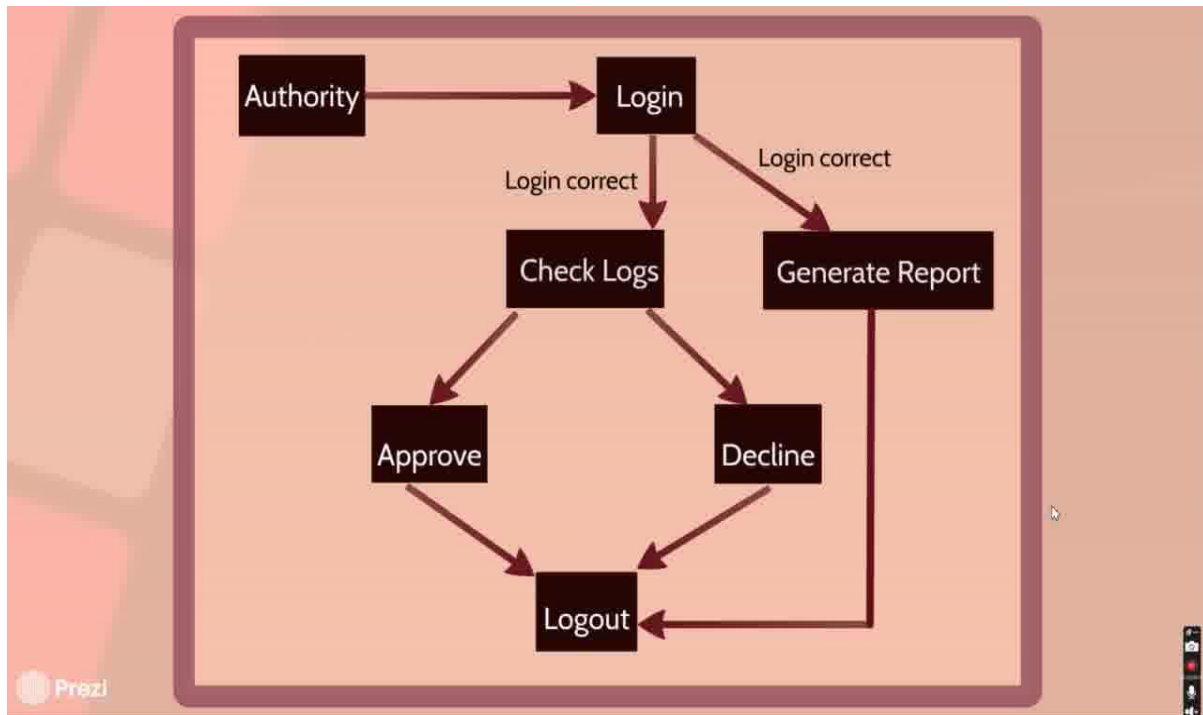
A data flow diagram is graphical tool used to describe and analyze movement of data through a system. These are the central tool and the basis from which the other components are developed. The transformation of data from input to output, through processed, may be described logically and independently of physical components associated with the system. These are known as the logical data flow diagrams. The physical data flow diagrams show the actual implements and movement of data between people, departments and workstations. A full description of a system actually consists of a set of data flow diagrams. Using two familiar notations Yourdon, Gane and Sarson notation develops the data flow diagrams. Each component in a DFD is labeled with a descriptive name. Process is further identified with a number that will be used for identification purpose. The development of DFD'S is done in several levels. Each process in lower level diagrams can be broken down into a more detailed DFD in the next level. The loplevel diagram is often called context diagram. It consists a single process bit, which plays vital role in studying the current system.

The process in the context level diagram is exploded into other process at the first level DFD.

The idea behind the explosion of a process into more process is that understanding at one level of detail is exploded into greater detail at the next level. This is done until further explosion is necessary and an adequate amount of detail is described for analyst to understand the process.

Larry Constantine first developed the DFD as a way of expressing system requirements in a graphical from, this lead to the modular design.

A DFD is also known as a "bubble Chart" has the purpose of clarifying system requirements and identifying major transformations that will become programs in system design. So it is the starting point of the design to the lowest level of detail. A DFD consists of a series of bubbles joined by data flows in the system.

INTERFACE SCREEN

ADMIN LOGIN

FACULTY LOGIN

Modules of Faculty Leave Management System:

- Faculty Management Module: Used for managing the Faculty details.

- Department Module : Used for managing the Faculties Departments

- Leave Type Module : Used for managing the details of Leave Type

- Leave Management Module: Used for managing the information and details of Leave

- Faculty Module : Used for managing the Faculty details

- Password Module : Used for Updating the New password

- Login Module: Used for managing the login details

- Users Module : Used for managing the users of the system

- Leave Details Module : Admin can enquire the reason for their faculties absence

ADMIN MODULE

DASHBOARD

LEAVE DETAILS :

FACULTY MODULE

PROFILE :

CHANGE PASSWORD :

LEAVE MODULE

LEAVE APPLICATION :

LEAVE HISTORY :

SYSTEM TESTING
AND IMPLEMENTATION

SYSTEM TESTING AND IMPLEMENTATION

TESTING APPROACH :-

The software engineering process can be viewed as a spiral. Initially system engineering defines the role of software and leads to software requirement analysis where the information domain, functions, behavior, performance, constraints and validation criteria for software are established. Moving inward along the spiral, we come to design and finally to coding. To develop computer software we spiral in along streamlines that decrease the level of abstraction on each turn.

A strategy for software testing may also be viewed in the context of the spiral. Unit testing begins at the vertex of the spiral and concentrates on each unit of the software as implemented in source code. Testing progress by moving outward along the spiral to integration testing, where the focus is on the design and the construction of the software architecture. Talking another turn on outward on the spiral we encounter validation testing where requirements established as part of software requirements analysis are validated against the software that has been constructed. Finally we arrive at system testing, where the software and other system elements are tested as a whole.

UNIT TESTING

MODULE TESTING

Component Testing

SUB-SYSTEM TESING

SYSTEM TESTING

Integration Testing

ACCEPTANCE TESTING

User Testing
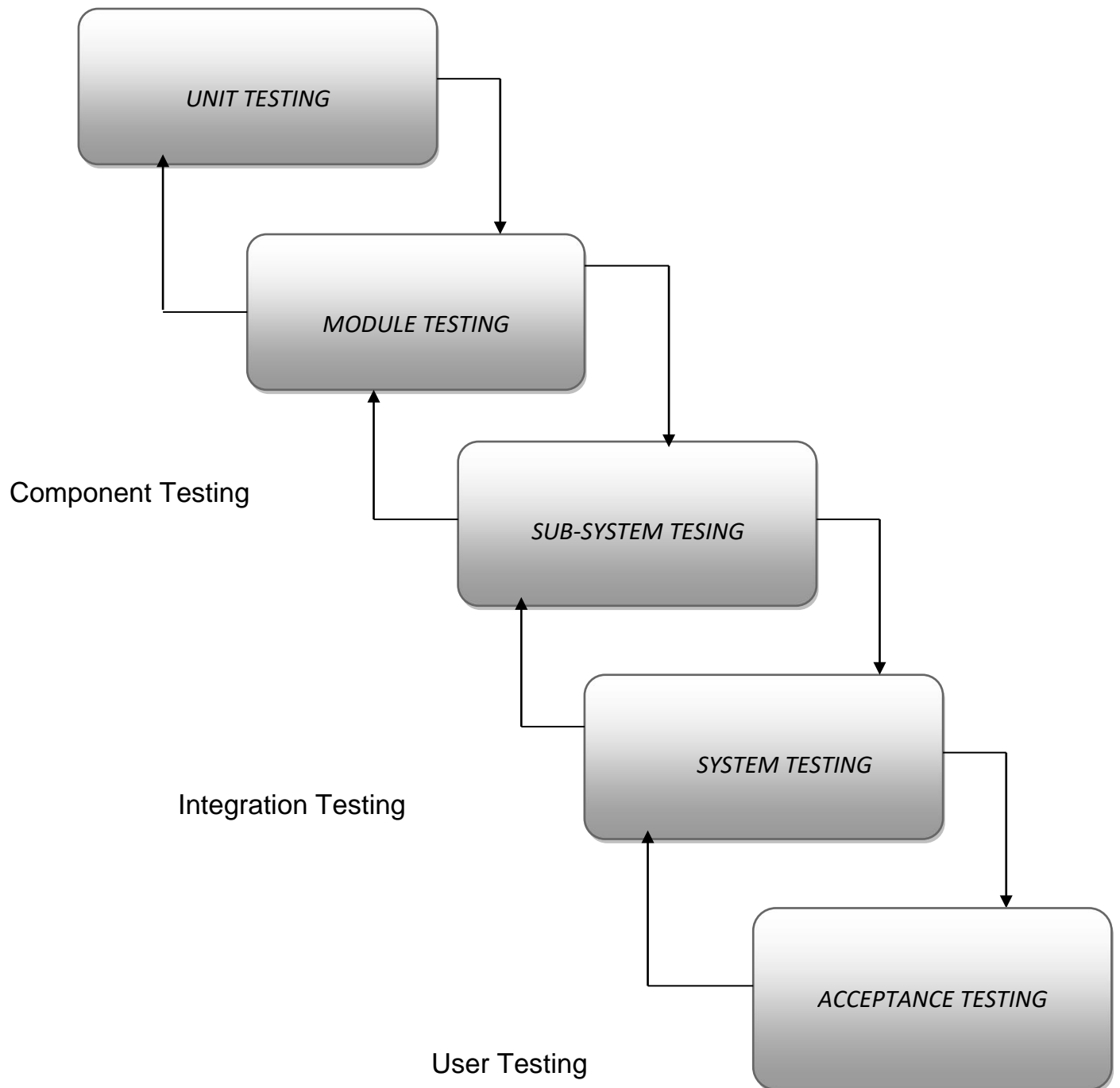
Unit Testing:-

Unit testing focuses verification effort on the smallest unit of software design, the module. The unit testing we have is white box oriented and some modules the steps are conducted in parallel.

1. WHITE BOX TESTING:

This type of testing ensures that

·   All independent paths have been exercised at least once

·   All logical decisions have been exercised on their true and false sides

To follow the concept of white box testing we have tested each form .we have created independently to verify that Data flow is correct, All conditions are exercised to check their validity, All loops are executed on their boundaries.

2. CONDITIONAL TESTING:

In this part of the testing each of the conditions were tested to both true and false aspects. And all the resulting paths were tested. So that each path that may be generate on particular condition is traced to uncover any possible errors.

3. DATA FLOW TESTING:

This type of testing selects the path of the program according to the location of definition and use of variables. This kind of testing was used only when some local variable were declared. The definition-use chain method was used in this type of testing. These were particularly useful in nested statements.

4. **LOOP TESTING:**

- All the loops were tested at their limits, just above them and just below them.

- All the loops were skipped at least once.

- For nested loops test the inner most loop first and then work outwards.

- For concatenated loops the values of dependent loops were set with the help of connected loop.

- Unstructured loops were resolved into nested loops or concatenated loops and tested as above.

SYSTEM SECURITY

SYSTEM SECURITY

The protection of computer based resources that includes hardware, software, data, procedures and people against unauthorized use is called system security.

System Security can be divided into four related issues:

- Security

- Integrity

- Privacy

- Confidentiality

- ➢ SYSTEM SECURITY refers to the technical innovations and procedures applied to the hardware and operation systems to protect against deliberate or accidental damage from a defined threat.

- ➢ DATA SECURITY is the protection of data from loss, disclosure, modification and destruction.

- ➢ SYSTEM INTEGRITY refers to the power functioning of hardware and programs, appropriate physical security and safety against external threats such as eavesdropping and wiretapping.

- ➢ PRIVACY defines the rights of the user or organizations to determine what information they are willing to share with or accept from others and how the organization can be protected against unwelcome, unfair or excessive dissemination of information about it.

> CONFIDENTIALITY is a special status given to sensitive information in a database to minimize the possible invasion of privacy. It is an attribute of information that characterizes its need for protection.

SECURITY IN SOFTWARE :-

System security refers to various validations on data in form of checks and controls to avoid the system from failing. It is always important to ensure that only valid data is entered and only valid operations are performed on the system. The system Facultys two types of checks and controls:

a. Client side validation.

b. Server side validation.

CLIENT SIDE VALIDATION:

Various client side validations are used to ensure on the client side that only valid data is entered. Client side validation saves server time and load to handle invalid data. Some checks imposed are:

- VBScript in used to ensure those required fields are filled with suitable data only.

Maximum lengths of the fields of the forms are appropriately defined.

- Forms cannot be submitted without filling up the mandatory data so that manual mistakes of submitting empty fields that are mandatory can be sorted out at the client side to save the server time and load.

- Tab-indexes are set according to the need and taking into account the ease of user while working with the system.

SERVER SIDE VALIDATION:

Some checks cannot be applied at client side. Server side checks are necessary to save the system from failing and intimating the user that some invalid operation has been performed or the performed operation is restricted. Some of the server side checks imposed is:

- Server side constraint has been imposed to check for the validity of primary key and foreign key. A primary key value cannot be duplicated. Any attempt to duplicate the primary value results into a message intimating the user about those values through the forms using foreign key can be updated only of the existing foreign key values.

- User is intimating through appropriate messages about the successful operations or exceptions occurring at server side.

- Various Access Control Mechanisms have been built so that one user may not agitate upon another. Access permissions to various types of users are controlled according to the organizational structure. Only permitted users can log on to the system and can have access according to their category. User-name, passwords and permissions are controlled o the server side.

CONCLUSION

CONCLUSION

It has been a great pleasure for me to work on this exciting and challenging project. This project proved good for me as it provided practical knowledge of not only programming in web based application and no some extent Windows Application and SQL Server, but also about all handling procedure related with **"Faculty leave management system"**. It also provides knowledge about the latest technology used in developing web enabled application and client server technology that will be great demand in future. This will provide better opportunities and guidance in future in developing projects independently.

LIMITATIONS :-

- The size of the database increases day-by-day, increasing the load on the database back up and data maintenance activity.
- Training for simple computer operations is necessary for the   users working on the system.

FUTURE IMPROVEMENT :-

- This system being web based and an undertaking of cyber security division needs to be thoroughly tested to find out any security gaps.
- A console for the data centre may be made available to allow the personnel to monitor on the site which cleared for hosting during a particular period.
- Moreover, it is just a beginning, further the system may be utilized in various other types of auditing operation viz network auditing or similar process workflow based application.

BENEFITS:-

The project is identified by the merits of the system offered to the user. The merits of this project are as follows: -

- It's a web-enabled project.

- This project offers user to enter the data through simple and interactive forms. This is very helpful for the client to enter the desired information through so much simplicity.

- The user is mainly more concerned about the validity of the data, whatever he is entering. There are checks on every stages of any new creation, data entry or updation so that the user cannot enter the invalid data, which can create problems at later date.

- Sometimes the user finds in the later stages of using project that he needs to update some of the information that he entered earlier. There are options for him by which he can update the records. Moreover there is restriction for his that he cannot change the primary data field.

- User is provided the option of monitoring the records he entered earlier. He can see the desired records with the variety of options provided by him.

- Data storage and retrieval will become faster and easier to maintain because data is stored in a systematic manner and in a single database.

- Decision making process would be greatly enhanced because of faster processing of information since data collection from information available on computer takes much less time then manual system.

- Allocating of sample results becomes much faster because at a time the user can see the records of last years.

- Easier and faster data transfer through latest technology associated with the computer and communication.

- Through these features it will increase the efficiency, accuracy and transparency.

REFERENCE

- Google for problem solving

- http://www.pythonworld.com/pythonworld/jw-01-1998/jw-01- Credentialreview.html

- Database Programming with JDBC and Python by O'Reilly

- http://www.jdbc-tutorial.com/

- Manish, S., Prachi, S., Rohil, Shubham, S. and Shiwani, S. (2015). Leave and Payroll Management System. International Conference on Computing and Virtualization, Thakur, India.

- https://www.tutorialspoint.com/python/

- http://www.pythontpoint.com/python-tutorial

- Mishal, R., Prity, S., Prachir C. and Arhant, C. (2017). Employee Leave Management System. International Journal of Advance Research and Innovative Ideas in Education.

- https://docs.oracle.com/javase/tutorial/

- http://www.wampserver.com/en/

- http://www.Django.net/

- http://www.tutorialspoint.com/mysql/

- httpd.apache.org/docs/2.0/misc/tutorials.html

SOURCE CODE

```php
<?php
session_start();
include('includes/config.php');
if(isset($_POST['signin']))
{
$uname=$_POST['username'];
$password=md5($_POST['password']);
$sql ="SELECT UserName,Password FROM admin WHERE UserName=:uname and
Password=:password";
$query= $dbh -> prepare($sql);
$query-> bindParam(':uname', $uname, PDO::PARAM_STR);
$query-> bindParam(':password', $password, PDO::PARAM_STR);
$query-> execute();
$results=$query->fetchAll(PDO::FETCH_OBJ);
if($query->rowCount() > 0)
{
$_SESSION['alogin']=$_POST['username'];
echo "<script type='text/javascript'> document.location = 'dashboard.php'; </script>";
} else{

  echo "<script>alert('Invalid Details');</script>";


}


}

?>

<!DOCTYPE html>
<html lang="en">
   <head>
```

```html
<!-- Title -->
<title>KASC Leave Management</title>
<link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/4.5.0/css/bootstrap.min.css">
<meta name="viewport" content="width=device-width, initial-scale=1.0, maximum-scale=1.0, user-scalable=no"/>
<meta charset="UTF-8">
<meta name="description" content="Responsive Admin Dashboard Template" />
<meta name="keywords" content="admin,dashboard" />
<meta name="author" content="Steelcoders" />


<!-- Styles -->
<link type="text/css" rel="stylesheet" href="../assets/plugins/materialize/css/materialize.css"/>
<link href="http://fonts.googleapis.com/icon?family=Material+Icons" rel="stylesheet">
<link href="../assets/plugins/material-preloader/css/materialPreloader.min.css" rel="stylesheet">
<link href="../assets/css/alpha.min.css" rel="stylesheet" type="text/css"/>
<link href="../assets/css/style.css" rel="stylesheet" type="text/css"/>
</head>
<body>
<nav class="navbar navbar-expand-lg navbar-light py-3">
    <button class="navbar-toggler" type="button" data-toggle="collapse" data-target="#navbarNavAltMarkup" aria-controls="navbarNavAltMarkup" aria-expanded="false" aria-label="Toggle navigation">
    <span class="navbar-toggler-icon"></span>
    </button>
    <div class="collapse navbar-collapse d-flex justify-content-center align-items-center" id="navbarNavAltMarkup">
    <div class="navbar-nav d-flex justify-content-center align-items-center">
    <!-- <a class="nav-item text-white font-weight-bold nav-link active ml-3" href="#">Home <span class="sr-only">(current)</span></a> -->
    <a class="nav-item text-white font-weight-bold nav-link ml-3" href="#">Principal Login</a>
    <a class="nav-item text-white font-weight-bold nav-link ml-3" href="../index.php">Faculty Login</a>

    </div>
    </div>
    </nav>
    <main class="mn-inner mt-5">
        <div class="row d-flex justify-content-center align-items-center">
```

```html
<h4 class="font-weight-bold text-center text-danger">KASC Leave Management</h4>


            <div class="col-md-12">
                <div class="row" >
    <div class="col-md-3"></div>
                    <div class="col-md-6 d-flex justify-content-center align-items-center">
                      <div class="card white darken-1">
                        <div class="card-content">
                          <span class="card-title text-danger" style="font-size:20px;">Principal
Login</span>
                          <div class="row">
                            <form class="col s12" name="signin" method="post">
                              <div class="input-field col s12">
                                <input id="username" type="text" name="username" class="validate"
autocomplete="off" required >
                                <label for="email">Enter Username</label>
                              </div>
                              <div class="input-field col s12">
                                <input id="password" type="password" class="validate" name="password"
autocomplete="off" required>
                                <label for="password">Enter Password</label>
                              </div>
                              <div class="col s12 center m-t-sm">


                                <input type="submit" name="signin" value="Login" class="waves-effect
waves-light btn teal">
                              </div>
                            </form>
                          </div>
                        </div>
                      </div>
                    </div>
                </div>
            </div>
        </main>



    <!-- Javascripts -->
```

```php
<script src="../assets/plugins/jquery/jquery-2.2.0.min.js"></script>
<script src="../assets/plugins/materialize/js/materialize.min.js"></script>
<script src="../assets/plugins/material-preloader/js/materialPreloader.min.js"></script>
<script src="../assets/plugins/jquery-blockui/jquery.blockui.js"></script>
<script src="../assets/js/alpha.min.js"></script>
</section>
</body>
</html>


<?php
session_start();
error_reporting(0);
include('includes/config.php');
if(strlen($_SESSION['alogin'])==0)
    {
header('location:index.php');
}
else{
if(isset($_POST['add']))
{
$deptname=$_POST['departmentname'];

$deptcode=$_POST['deptcode'];
$sql="INSERT INTO tbldepartments(DepartmentName,DepartmentCode)
VALUES(:deptname,:deptcode)";
$query = $dbh->prepare($sql);
$query->bindParam(':deptname',$deptname,PDO::PARAM_STR);
$query->bindParam(':deptcode',$deptcode,PDO::PARAM_STR);

$query->execute();
$lastInsertId = $dbh->lastInsertId();
if($lastInsertId)
{
$msg="Department Created Successfully";
}
else
{
```

```php
$error="Something went wrong. Please try again";
}


}


?>
```

```html
<!DOCTYPE html>
<html lang="en">
  <head>

    <!-- Title -->
    <title>KASC Leave Management</title>

    <meta name="viewport" content="width=device-width, initial-scale=1.0, maximum-scale=1.0, user-scalable=no"/>
    <meta charset="UTF-8">
    <meta name="description" content="Responsive Admin Dashboard Template" />
    <meta name="keywords" content="admin,dashboard" />
    <meta name="author" content="Steelcoders" />

    <!-- Styles -->
    <link type="text/css" rel="stylesheet" href="../assets/plugins/materialize/css/materialize.min.css"/>
    <link type="text/css" rel="stylesheet" href="../assets/plugins/materialize/css/materialize.css"/>
    <link href="http://fonts.googleapis.com/icon?family=Material+Icons" rel="stylesheet">
    <link href="../assets/plugins/material-preloader/css/materialPreloader.min.css" rel="stylesheet">
    <link href="../assets/css/alpha.min.css" rel="stylesheet" type="text/css"/>
    <link href="../assets/css/custom.css" rel="stylesheet" type="text/css"/>
    <link href="../assets/css/style.css" rel="stylesheet" type="text/css"/>
 <style>
    .errorWrap {
  padding: 10px;
  margin: 0 0 20px 0;
  background: #fff;
  border-left: 4px solid #dd3d36;
  -webkit-box-shadow: 0 1px 1px 0 rgba(0,0,0,.1);
  box-shadow: 0 1px 1px 0 rgba(0,0,0,.1);
}
```

```
.succWrap{
    padding: 10px;
    margin: 0 0 20px 0;
    background: #fff;
    border-left: 4px solid #5cb85c;
    -webkit-box-shadow: 0 1px 1px 0 rgba(0,0,0,.1);
    box-shadow: 0 1px 1px 0 rgba(0,0,0,.1);
}
    </style>
  </head>
  <body>
 <?php include('includes/header.php');?>

    <?php include('includes/sidebar.php');?>
       <main class="mn-inner mt-5" >


         <div class="row d-flex justify-content-center align-items-center">
           <div class="col s12">
             <div class="page-title" style="color:green;">Add Department</div>
           </div>
           <div class="col s12 m12 25">
             <div class="card">
                <div class="card-content">


                   <div class="row">
                      <form class="col s12" name="chngpwd" method="post">
                          <?php if($error){?><div class="errorWrap"><strong>ERROR</strong>:<?php
echo htmlentities($error); ?> </div><?php }
          else if($msg){?><div class="succWrap"><strong></strong><?php echo htmlentities($msg); ?>
</div><?php }?>



                        <div class="row">
                          <div class="input-field col s12">
<input id="departmentname" type="text"  class="validate" autocomplete="off" name="departmentname"
required>
                             <label for="deptname">Enter Department Name</label>
                          </div>
```

57

```html
<div class="input-field col s12" align="center">
<button type="submit" name="add" class="waves-effect waves-light btn indigo m-b-xs">ADD</button>

</div>




                    </div>


                </form>
              </div>
            </div>
          </div>




        </div>


      </div>
    </main>


  </div>
  <div class="left-sidebar-hover"></div>


  <!-- Javascripts -->
  <script src="../assets/plugins/jquery/jquery-2.2.0.min.js"></script>
  <script src="../assets/plugins/materialize/js/materialize.min.js"></script>
  <script src="../assets/plugins/material-preloader/js/materialPreloader.min.js"></script>
  <script src="../assets/plugins/jquery-blockui/jquery.blockui.js"></script>
  <script src="../assets/js/alpha.min.js"></script>
```

```php
      <script src="../assets/js/pages/form_elements.js"></script>


   </body>
</html>
<?php } ?>



<?php
session_start();
error_reporting(0);
include('includes/config.php');
if(strlen($_SESSION['alogin'])==0)
   {
header('location:index.php');
}
else{
if(isset($_POST['add']))
{
$leavetype=$_POST['leavetype'];
$description=$_POST['description'];
$sql="INSERT INTO tblleavetype(LeaveType) VALUES(:leavetype)";
$query = $dbh->prepare($sql);
$query->bindParam(':leavetype',$leavetype,PDO::PARAM_STR);
$query->execute();
$lastInsertId = $dbh->lastInsertId();
if($lastInsertId)
{
$msg="Leave type added Successfully";
}
else
{
$error="Something went wrong. Please try again";
}


}

   ?>
```

```html
<!DOCTYPE html>
<html lang="en">
    <head>

        <!-- Title -->
        <title>KASC Leave Management</title>

        <meta name="viewport" content="width=device-width, initial-scale=1.0, maximum-scale=1.0, user-scalable=no"/>
        <meta charset="UTF-8">
        <meta name="description" content="Responsive Admin Dashboard Template" />
        <meta name="keywords" content="admin,dashboard" />
        <meta name="author" content="Steelcoders" />

        <!-- Styles -->
        <link type="text/css" rel="stylesheet" href="../assets/plugins/materialize/css/materialize.min.css"/>
        <link type="text/css" rel="stylesheet" href="../assets/plugins/materialize/css/materialize.css"/>
        <link href="http://fonts.googleapis.com/icon?family=Material+Icons" rel="stylesheet">
        <link href="../assets/plugins/material-preloader/css/materialPreloader.min.css" rel="stylesheet">
        <link href="../assets/css/alpha.min.css" rel="stylesheet" type="text/css"/>
        <link href="../assets/css/custom.css" rel="stylesheet" type="text/css"/>
        <link href="../assets/css/style.css" rel="stylesheet" type="text/css"/>
  <style>
      .errorWrap {
  padding: 10px;
  margin: 0 0 20px 0;
  background: #fff;
  border-left: 4px solid #dd3d36;
  -webkit-box-shadow: 0 1px 1px 0 rgba(0,0,0,.1);
  box-shadow: 0 1px 1px 0 rgba(0,0,0,.1);
}
.succWrap{
  padding: 10px;
  margin: 0 0 20px 0;
  background: #fff;
  border-left: 4px solid #5cb85c;
  -webkit-box-shadow: 0 1px 1px 0 rgba(0,0,0,.1);
  box-shadow: 0 1px 1px 0 rgba(0,0,0,.1);
```

```php
        }
    </style>
  </head>
  <body>
  <?php include('includes/header.php');?>


    <?php include('includes/sidebar.php');?>
      <main class="mn-inner">
        <div class="row">
          <div class="col s12">
            <div class="page-title" style="color: green;">Add Leave Type</div>
          </div>
          <div class="col s12 m12 25">
            <div class="card">
              <div class="card-content">


                <div class="row">
                  <form class="col s12" name="chngpwd" method="post">
                    <?php if($error){?><div class="errorWrap"><strong>ERROR</strong> : <?php
echo htmlentities($error); ?> </div><?php }
        else if($msg){?><div class="succWrap"><strong></strong><?php echo htmlentities($msg); ?>
</div><?php }?>
                      <div class="row">
                        <div class="input-field col s12">
<input id="leavetype" type="text"  class="validate" autocomplete="off" name="leavetype"  required>
                          <label for="leavetype">Leave Type</label>
                        </div>
```

```php
<div class="input-field col s12" align="center">
<button type="submit" name="add" class="waves-effect waves-light btn indigo m-b-xs">ADD</button>

</div>
```

61

```
                          </div>

                        </form>
                    </div>
                  </div>
                </div>


              </div>


            </div>
          </main>


        </div>
        <div class="left-sidebar-hover"></div>


        <!-- Javascripts -->
        <script src="../assets/plugins/jquery/jquery-2.2.0.min.js"></script>
        <script src="../assets/plugins/materialize/js/materialize.min.js"></script>
        <script src="../assets/plugins/material-preloader/js/materialPreloader.min.js"></script>
        <script src="../assets/plugins/jquery-blockui/jquery.blockui.js"></script>
        <script src="../assets/js/alpha.min.js"></script>
        <script src="../assets/js/pages/form_elements.js"></script>


    </body>
</html>
<?php } ?>

<?php
session_start();
error_reporting(0);
include('includes/config.php');
if(strlen($_SESSION['alogin'])==0)
```

62

```php
    {
header('location:index.php');
}
else{



?>
```
```html
<!DOCTYPE html>
<html lang="en">
    <head>


        <!-- Title -->
        <title>KASC Leave Management </title>

        <meta name="viewport" content="width=device-width, initial-scale=1.0, maximum-scale=1.0, user-scalable=no"/>
        <meta charset="UTF-8">
        <meta name="description" content="Responsive Admin Dashboard Template" />
        <meta name="keywords" content="admin,dashboard" />
        <meta name="author" content="Steelcoders" />


        <!-- Styles -->
        <link type="text/css" rel="stylesheet" href="../assets/plugins/materialize/css/materialize.min.css"/>
        <link type="text/css" rel="stylesheet" href="../assets/plugins/materialize/css/materialize.css"/>
        <link href="http://fonts.googleapis.com/icon?family=Material+Icons" rel="stylesheet">
        <link href="../assets/plugins/material-preloader/css/materialPreloader.min.css" rel="stylesheet">
        <link href="../assets/plugins/datatables/css/jquery.dataTables.min.css" rel="stylesheet">

            <link href="../assets/plugins/google-code-prettify/prettify.css" rel="stylesheet" type="text/css"/>
        <!-- Theme Styles -->
        <link href="../assets/css/alpha.min.css" rel="stylesheet" type="text/css"/>
        <link href="../assets/css/custom.css" rel="stylesheet" type="text/css"/>
        <link href="../assets/css/style.css" rel="stylesheet" type="text/css"/>
<style>
    .errorWrap {
    padding: 10px;
    margin: 0 0 20px 0;
```

```css
        background: #fff;
        border-left: 4px solid #dd3d36;
        -webkit-box-shadow: 0 1px 1px 0 rgba(0,0,0,.1);
        box-shadow: 0 1px 1px 0 rgba(0,0,0,.1);
    }
.succWrap{
        padding: 10px;
        margin: 0 0 20px 0;
        background: #fff;
        border-left: 4px solid #5cb85c;
        -webkit-box-shadow: 0 1px 1px 0 rgba(0,0,0,.1);
        box-shadow: 0 1px 1px 0 rgba(0,0,0,.1);
    }
    </style>
</head>
<body>
    <?php include('includes/header.php');?>

    <?php include('includes/sidebar.php');?>
        <main class="mn-inner">
            <div class="row">
                <div class="col s12">
                    <div class="page-title" style="color: green;">Approved Leave History</div>
                </div>

                <div class="col s12 m12 l12">
                    <div class="card">
                        <div class="card-content">
                            <?php if($msg){?><div class="succWrap"><strong>SUCCESS</strong> : <?php echo
htmlentities($msg); ?> </div><?php }?>
                            <table id="example" class="display responsive-table ">
                                <thead>
                                    <tr>
                                        <th style="color: red;">Sl No.</th>
                                        <th style="color: red;" width="200">Faculty Name</th>
                                        <th style="color: red;" width="120">Leave Type</th>

                                        <th style="color: red;" width="180">Posting Date</th>
```

64

```php
                              <th style="color: red;">Status</th>
                              <th style="color: red;"></th>
                          </tr>
                      </thead>

                      <tbody>
<?php
$status=1;
$sql = "SELECT tblleaves.id as
lid,tblemployees.FirstName,tblemployees.LastName,tblemployees.EmpId,tblemployees.id,tblleaves.Leave
Type,tblleaves.PostingDate,tblleaves.Status from tblleaves join tblemployees on
tblleaves.empid=tblemployees.id where tblleaves.Status=:status order by lid desc";
$query = $dbh -> prepare($sql);
$query->bindParam(':status',$status,PDO::PARAM_STR);
$query->execute();
$results=$query->fetchAll(PDO::FETCH_OBJ);
$cnt=1;
if($query->rowCount() > 0)
{
foreach($results as $result)
{
    ?>

                      <tr>
                          <td> <b><?php echo htmlentities($cnt);?></b></td>
                           <td><a href="editemployee.php?empid=<?php echo htmlentities($result-
>id);?>" target="_blank"><?php echo htmlentities($result->FirstName." ".$result->LastName);?>(<?php
echo htmlentities($result->EmpId);?>)</a></td>
                          <td><?php echo htmlentities($result->LeaveType);?></td>
                          <td><?php echo htmlentities($result->PostingDate);?></td>
                  <td><?php $stats=$result->Status;
if($stats==1){
                      ?>
                          <span style="color: green">Approved</span>
                          <?php } if($stats==2) { ?>
                          <span style="color: red">Not Approved</span>
                          <?php } if($stats==0) { ?>
 <span style="color: blue">waiting for approval</span>
```

```php
<?php } ?>
```
```html
                    </td>


        <td>
         <td><a href="leave-details.php?leaveid=<?php echo htmlentities($result->lid);?>" class="waves-
effect waves-light btn blue m-b-xs"  > View Details</a></td>
                    </tr>
```
```php
                        <?php $cnt++;} }?>
```
```html
                    </tbody>
                </table>
            </div>
          </div>
        </div>
      </div>
     </main>


    </div>
    <div class="left-sidebar-hover"></div>


    <!-- Javascripts -->
    <script src="../assets/plugins/jquery/jquery-2.2.0.min.js"></script>
    <script src="../assets/plugins/materialize/js/materialize.min.js"></script>
    <script src="../assets/plugins/material-preloader/js/materialPreloader.min.js"></script>
    <script src="../assets/plugins/jquery-blockui/jquery.blockui.js"></script>
    <script src="../assets/plugins/datatables/js/jquery.dataTables.min.js"></script>
    <script src="../assets/js/alpha.min.js"></script>
    <script src="../assets/js/pages/table-data.js"></script>
     <script src="assets/js/pages/ui-modals.js"></script>
    <script src="assets/plugins/google-code-prettify/prettify.js"></script>


  </body>
</html>
```
```php
<?php } ?>



<?php
```

66

```php
session_start();
error_reporting(0);
include('includes/config.php');
if(strlen($_SESSION['alogin'])==0)
   {
header('location:index.php');
}
else{
?>
```

```html
<!DOCTYPE html>
<html lang="en">
   <head>

      <!-- Title -->
      <title>KASC Leave Management</title>

      <meta name="viewport" content="width=device-width, initial-scale=1.0, maximum-scale=1.0, user-scalable=no"/>
      <meta charset="UTF-8">
      <meta name="description" content="Responsive Admin Dashboard Template" />
      <meta name="keywords" content="admin,dashboard" />
      <meta name="author" content="Steelcoders" />

      <!-- Styles -->
      <link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/4.5.0/css/bootstrap.min.css">
      <link type="text/css" rel="stylesheet" href="../assets/plugins/materialize/css/materialize.css"/>
      <link href="http://fonts.googleapis.com/icon?family=Material+Icons" rel="stylesheet">
      <link href="../assets/plugins/metrojs/MetroJs.min.css" rel="stylesheet">
      <link href="../assets/plugins/weather-icons-master/css/weather-icons.min.css" rel="stylesheet">

      <!-- Theme Styles -->
      <link href="../assets/css/alpha.min.css" rel="stylesheet" type="text/css"/>
      <link href="../assets/css/style.css" rel="stylesheet" type="text/css"/>

   </head>
   <body>
```

```php
<?php include('includes/header.php');?>

<?php include('includes/sidebar.php');?>

<main class="mn-inner mt-5">


<span class="card-title text-success">Latest Leave Applications</span>
<table id="example" class="display responsive-table bg-transparent">
<thead>
<tr>
<th class="text-danger">Sl No.</th>
<th width="200" class="text-danger">Faculty Name</th>
<th width="120" class="text-danger">Leave Type</th>


<th width="180" class="text-danger">Posting Date</th>
<th class="text-danger">Status</th>
<th align="center" class="text-danger text-center" ></th>
</tr>
</thead>


<tbody>
<?php $sql = "SELECT tblleaves.id as
lid,tblemployees.FirstName,tblemployees.LastName,tblemployees.EmpId,tblemployees.id,tblleaves.Leave
Type,tblleaves.PostingDate,tblleaves.Status from tblleaves join tblemployees on
tblleaves.empid=tblemployees.id order by lid desc limit 6";
$query = $dbh -> prepare($sql);
$query->execute();
$results=$query->fetchAll(PDO::FETCH_OBJ);
$cnt=1;
if($query->rowCount() > 0)
{
foreach($results as $result)
{
    ?>


<tr>
<td> <b><?php echo htmlentities($cnt);?></b></td>
```

68

```php
                    <td><a href="editemployee.php?empid=<?php echo htmlentities($result-
>id);?>" target="_blank"><?php echo htmlentities($result->FirstName." ".$result->LastName);?>(<?php
echo htmlentities($result->EmpId);?>)</a></td>
                        <td><?php echo htmlentities($result->LeaveType);?></td>
                        <td><?php echo htmlentities($result->PostingDate);?></td>
                                <td><?php $stats=$result->Status;
if($stats==1){
                        ?>
                          <span style="color: green">APPROVED</span>
                          <?php } if($stats==2)  { ?>
                          <span style="color: red">DECLINED</span>
                          <?php } if($stats==0)  { ?>
<span style="color: blue">WAITING</span>
<?php } ?>


                        </td>


    <td>
     <td><a href="leave-details.php?leaveid=<?php echo htmlentities($result->lid);?>" class="waves-
effect waves-light btn blue m-b-xs"  > View Details</a></td>
                    </tr>
                      <?php $cnt++;} }?>
                    </tbody>
                  </table>
                </div>
              </div>
            </div>


                                <div class=""></div>



          </div>
        </div>


      </main>


    </div>
```

```php
    <!-- Javascripts -->
    <script src="../assets/plugins/jquery/jquery-2.2.0.min.js"></script>
    <script src="../assets/plugins/materialize/js/materialize.min.js"></script>
    <script src="../assets/plugins/material-preloader/js/materialPreloader.min.js"></script>
    <script src="../assets/plugins/jquery-blockui/jquery.blockui.js"></script>
    <script src="../assets/plugins/waypoints/jquery.waypoints.min.js"></script>
    <script src="../assets/plugins/counter-up-master/jquery.counterup.min.js"></script>
    <script src="../assets/plugins/chart.js/chart.min.js"></script>
    <script src="../assets/plugins/flot/jquery.flot.min.js"></script>
    <script src="../assets/plugins/flot/jquery.flot.time.min.js"></script>
    <script src="../assets/plugins/flot/jquery.flot.symbol.min.js"></script>
    <script src="../assets/plugins/flot/jquery.flot.resize.min.js"></script>
    <script src="../assets/plugins/flot/jquery.flot.tooltip.min.js"></script>
    <script src="../assets/plugins/curvedlines/curvedLines.js"></script>
    <script src="../assets/plugins/peity/jquery.peity.min.js"></script>
    <script src="../assets/js/alpha.min.js"></script>
    <script src="../assets/js/pages/dashboard.js"></script>

  </body>
</html>
<?php } ?>


<?php
session_start();
error_reporting(0);
include('includes/config.php');
if(strlen($_SESSION['alogin'])==0)
  {
header('location:index.php');
}
else{
?>


<!DOCTYPE html>
```

```html
<html lang="en">
  <head>

    <!-- Title -->
    <title>KASC Leave Management</title>

    <meta name="viewport" content="width=device-width, initial-scale=1.0, maximum-scale=1.0, user-scalable=no"/>
    <meta charset="UTF-8">
    <meta name="description" content="Responsive Admin Dashboard Template" />
    <meta name="keywords" content="admin,dashboard" />
    <meta name="author" content="Steelcoders" />

    <!-- Styles -->
    <link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/4.5.0/css/bootstrap.min.css">
    <link type="text/css" rel="stylesheet" href="../assets/plugins/materialize/css/materialize.css"/>
    <link href="http://fonts.googleapis.com/icon?family=Material+Icons" rel="stylesheet">
    <link href="../assets/plugins/metrojs/MetroJs.min.css" rel="stylesheet">
    <link href="../assets/plugins/weather-icons-master/css/weather-icons.min.css" rel="stylesheet">


    <!-- Theme Styles -->
    <link href="../assets/css/alpha.min.css" rel="stylesheet" type="text/css"/>
    <link href="../assets/css/style.css" rel="stylesheet" type="text/css"/>

  </head>
  <body>
      <?php include('includes/header.php');?>

    <?php include('includes/sidebar.php');?>

      <main class="mn-inner mt-5">


                    <span class="card-title text-success">Latest Leave Applications</span>
                <table id="example" class="display responsive-table bg-transparent">
                    <thead>
                      <tr>
```

```php
                                        <th class="text-danger">Sl No.</th>
                                        <th width="200" class="text-danger">Faculty Name</th>
                                        <th width="120" class="text-danger">Leave Type</th>

                                        <th width="180" class="text-danger">Posting Date</th>
                                        <th class="text-danger">Status</th>
                                        <th align="center" class="text-danger text-center" ></th>
                                    </tr>
                                </thead>

                                <tbody>
<?php $sql = "SELECT tblleaves.id as
lid,tblemployees.FirstName,tblemployees.LastName,tblemployees.EmpId,tblemployees.id,tblleaves.Leave
Type,tblleaves.PostingDate,tblleaves.Status from tblleaves join tblemployees on
tblleaves.empid=tblemployees.id order by lid desc limit 6";
$query = $dbh -> prepare($sql);
$query->execute();
$results=$query->fetchAll(PDO::FETCH_OBJ);
$cnt=1;
if($query->rowCount() > 0)
{
foreach($results as $result)
{
    ?>

                            <tr>
                                <td> <b><?php echo htmlentities($cnt);?></b></td>
                                 <td><a href="editemployee.php?empid=<?php echo htmlentities($result-
>id);?>" target="_blank"><?php echo htmlentities($result->FirstName." ".$result->LastName);?>(<?php
echo htmlentities($result->EmpId);?>)</a></td>
                                <td><?php echo htmlentities($result->LeaveType);?></td>
                                <td><?php echo htmlentities($result->PostingDate);?></td>
                                        <td><?php $stats=$result->Status;
if($stats==1){
                                ?>
                                   <span style="color: green">APPROVED</span>
                                   <?php } if($stats==2)  { ?>
                                   <span style="color: red">DECLINED</span>
```

```php
<?php } if($stats==0) { ?>
<span style="color: blue">WAITING</span>
<?php } ?>




                    </td>


      <td>
       <td><a href="leave-details.php?leaveid=<?php echo htmlentities($result->lid);?>" class="waves-
effect waves-light btn blue m-b-xs"  > View Details</a></td>
                      </tr>
                          <?php $cnt++;} }?>
                      </tbody>
                  </table>
                </div>
              </div>
             </div>


                                      <div class=""></div>




          </div>
        </div>


       </main>


     </div>




     <!-- Javascripts -->
     <script src="../assets/plugins/jquery/jquery-2.2.0.min.js"></script>
     <script src="../assets/plugins/materialize/js/materialize.min.js"></script>
     <script src="../assets/plugins/material-preloader/js/materialPreloader.min.js"></script>
     <script src="../assets/plugins/jquery-blockui/jquery.blockui.js"></script>
     <script src="../assets/plugins/waypoints/jquery.waypoints.min.js"></script>
     <script src="../assets/plugins/counter-up-master/jquery.counterup.min.js"></script>
     <script src="../assets/plugins/chart.js/chart.min.js"></script>
```

```php
        <script src="../assets/plugins/flot/jquery.flot.min.js"></script>
        <script src="../assets/plugins/flot/jquery.flot.time.min.js"></script>
        <script src="../assets/plugins/flot/jquery.flot.symbol.min.js"></script>
        <script src="../assets/plugins/flot/jquery.flot.resize.min.js"></script>
        <script src="../assets/plugins/flot/jquery.flot.tooltip.min.js"></script>
        <script src="../assets/plugins/curvedlines/curvedLines.js"></script>
        <script src="../assets/plugins/peity/jquery.peity.min.js"></script>
        <script src="../assets/js/alpha.min.js"></script>
        <script src="../assets/js/pages/dashboard.js"></script>


    </body>
</html>
<?php } ?>



<?php
session_start();
error_reporting(0);
include('includes/config.php');
if(strlen($_SESSION['alogin'])==0)
    {
header('location:index.php');
}
else{
if(isset($_POST['update']))
{
$did=intval($_GET['deptid']);
$deptname=$_POST['departmentname'];
$deptshortname=$_POST['departmentshortname'];
$deptcode=$_POST['deptcode'];
$sql="update tbldepartments set
DepartmentName=:deptname,DepartmentCode=:deptcode,DepartmentShortName=:deptshortname where
id=:did";
$query = $dbh->prepare($sql);
$query->bindParam(':deptname',$deptname,PDO::PARAM_STR);
$query->bindParam(':deptcode',$deptcode,PDO::PARAM_STR);
$query->bindParam(':deptshortname',$deptshortname,PDO::PARAM_STR);
$query->bindParam(':did',$did,PDO::PARAM_STR);
```

74

```php
$query->execute();
$msg="Department updated Successfully";
}


?>
```

```html
<!DOCTYPE html>
<html lang="en">
  <head>


    <!-- Title -->
    <title>KASC Leave Management</title>


    <meta name="viewport" content="width=device-width, initial-scale=1.0, maximum-scale=1.0, user-scalable=no"/>
    <meta charset="UTF-8">
    <meta name="description" content="Responsive Admin Dashboard Template" />
    <meta name="keywords" content="admin,dashboard" />
    <meta name="author" content="Steelcoders" />


    <!-- Styles -->
    <link type="text/css" rel="stylesheet" href="../assets/plugins/materialize/css/materialize.min.css"/>
    <link type="text/css" rel="stylesheet" href="../assets/plugins/materialize/css/materialize.css"/>
    <link href="http://fonts.googleapis.com/icon?family=Material+Icons" rel="stylesheet">
    <link href="../assets/plugins/material-preloader/css/materialPreloader.min.css" rel="stylesheet">
    <link href="../assets/css/alpha.min.css" rel="stylesheet" type="text/css"/>
    <link href="../assets/css/custom.css" rel="stylesheet" type="text/css"/>
    <link href="../assets/css/style.css" rel="stylesheet" type="text/css"/>
  <style>
    .errorWrap {
  padding: 10px;
  margin: 0 0 20px 0;
  background: #fff;
  border-left: 4px solid #dd3d36;
  -webkit-box-shadow: 0 1px 1px 0 rgba(0,0,0,.1);
  box-shadow: 0 1px 1px 0 rgba(0,0,0,.1);
}
.succWrap{
```

```
   padding: 10px;
   margin: 0 0 20px 0;
   background: #fff;
   border-left: 4px solid #5cb85c;
   -webkit-box-shadow: 0 1px 1px 0 rgba(0,0,0,.1);
   box-shadow: 0 1px 1px 0 rgba(0,0,0,.1);
}
    </style>
  </head>
  <body>
 <?php include('includes/header.php');?>


    <?php include('includes/sidebar.php');?>
      <main class="mn-inner">
        <div class="row">
          <div class="col s12">
            <div class="page-title" style="color: green;">Update Department Details</div>
          </div>
          <div class="col s12 m12 l6">
            <div class="card">
              <div class="card-content">


                  <div class="row">
                    <form class="col s12" name="chngpwd" method="post">
                        <?php if($error){?><div class="errorWrap"><strong>ERROR</strong>:<?php
echo htmlentities($error); ?> </div><?php }
        else if($msg){?><div class="succWrap"><strong></strong><?php echo htmlentities($msg); ?>
</div><?php }?>
<?php
$did=intval($_GET['deptid']);
$sql = "SELECT * from tbldepartments WHERE id=:did";
$query = $dbh -> prepare($sql);
$query->bindParam(':did',$did,PDO::PARAM_STR);
$query->execute();
$results=$query->fetchAll(PDO::FETCH_OBJ);
$cnt=1;
if($query->rowCount() > 0)
{
```

76

```php
foreach($results as $result)
{          ?>

                    <div class="row">

                    <div class="input-field col s12">
<input id="departmentname" type="text"  class="validate" autocomplete="off" name="departmentname"
value="<?php echo htmlentities($result->DepartmentName);?>"  required>
                          <label for="deptname">Department Name</label>
                    </div>

<?php }} ?>

<div class="input-field col s12">
<button type="submit" name="update" class="waves-effect waves-light btn indigo m-b-
xs">UPDATE</button>

</div>

                    </div>

                </form>
            </div>
          </div>
        </div>

          </div>

        </div>
      </main>
```

```html
        </div>
        <div class="left-sidebar-hover"></div>

        <!-- Javascripts -->
        <script src="../assets/plugins/jquery/jquery-2.2.0.min.js"></script>
        <script src="../assets/plugins/materialize/js/materialize.min.js"></script>
        <script src="../assets/plugins/material-preloader/js/materialPreloader.min.js"></script>
        <script src="../assets/plugins/jquery-blockui/jquery.blockui.js"></script>
        <script src="../assets/js/alpha.min.js"></script>
        <script src="../assets/js/pages/form_elements.js"></script>

    </body>
</html>
<?php } ?>


<?php
session_start();
include('includes/config.php');
if(isset($_POST['signin']))
{
$uname=$_POST['username'];
$password=md5($_POST['password']);
$sql ="SELECT UserName,Password FROM admin WHERE UserName=:uname and
Password=:password";
$query= $dbh -> prepare($sql);
$query-> bindParam(':uname', $uname, PDO::PARAM_STR);
$query-> bindParam(':password', $password, PDO::PARAM_STR);
$query-> execute();
$results=$query->fetchAll(PDO::FETCH_OBJ);
if($query->rowCount() > 0)
{
$_SESSION['alogin']=$_POST['username'];
echo "<script type='text/javascript'> document.location = 'dashboard.php'; </script>";
} else{

  echo "<script>alert('Invalid Details');</script>";
```

78

```html
    }


    }


?>


<!DOCTYPE html>
<html lang="en">
   <head>


      <!-- Title -->
      <title>KASC Leave Management</title>
    <link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/4.5.0/css/bootstrap.min.css">
      <meta name="viewport" content="width=device-width, initial-scale=1.0, maximum-scale=1.0, user-scalable=no"/>
      <meta charset="UTF-8">
      <meta name="description" content="Responsive Admin Dashboard Template" />
      <meta name="keywords" content="admin,dashboard" />
      <meta name="author" content="Steelcoders" />


      <!-- Styles -->
      <link type="text/css" rel="stylesheet" href="../assets/plugins/materialize/css/materialize.css"/>
      <link href="http://fonts.googleapis.com/icon?family=Material+Icons" rel="stylesheet">
      <link href="../assets/plugins/material-preloader/css/materialPreloader.min.css" rel="stylesheet">
      <link href="../assets/css/alpha.min.css" rel="stylesheet" type="text/css"/>
      <link href="../assets/css/style.css" rel="stylesheet" type="text/css"/>
   </head>
   <body>
<nav class="navbar navbar-expand-lg navbar-light py-3">
      <button class="navbar-toggler" type="button" data-toggle="collapse" data-target="#navbarNavAltMarkup" aria-controls="navbarNavAltMarkup" aria-expanded="false" aria-label="Toggle navigation">
      <span class="navbar-toggler-icon"></span>
      </button>
      <div class="collapse navbar-collapse d-flex justify-content-center align-items-center" id="navbarNavAltMarkup">
      <div class="navbar-nav d-flex justify-content-center align-items-center">
```

```html
        <!-- <a class="nav-item text-white font-weight-bold nav-link active ml-3" href="#">Home <span
class="sr-only">(current)</span></a> -->
        <a class="nav-item text-white font-weight-bold nav-link ml-3" href="#">Principal Login</a>
        <a class="nav-item text-white font-weight-bold nav-link ml-3" href="../index.php">Faculty
Login</a>

      </div>
      </div>
    </nav>
      <main class="mn-inner mt-5">
        <div class="row d-flex justify-content-center align-items-center">
    <h4 class="font-weight-bold text-center text-danger">KASC Leave Management</h4>


            <div class="col-md-12">
                <div class="row" >
  <div class="col-md-3"></div>
                  <div class="col-md-6 d-flex justify-content-center align-items-center">
                    <div class="card white darken-1">
                      <div class="card-content">
                        <span class="card-title text-danger" style="font-size:20px;">Principal
Login</span>
                        <div class="row">
                          <form class="col s12" name="signin" method="post">
                            <div class="input-field col s12">
                              <input id="username" type="text" name="username" class="validate"
autocomplete="off" required >
                              <label for="email">Enter Username</label>
                            </div>
                            <div class="input-field col s12">
                              <input id="password" type="password" class="validate" name="password"
autocomplete="off" required>
                              <label for="password">Enter Password</label>
                            </div>
                            <div class="col s12 center m-t-sm">


                              <input type="submit" name="signin" value="Login" class="waves-effect
waves-light btn teal">
                            </div>
```

```html
              </form>
            </div>
          </div>
        </div>
      </div>
    </main>


  <!-- Javascripts -->
  <script src="../assets/plugins/jquery/jquery-2.2.0.min.js"></script>
  <script src="../assets/plugins/materialize/js/materialize.min.js"></script>
  <script src="../assets/plugins/material-preloader/js/materialPreloader.min.js"></script>
  <script src="../assets/plugins/jquery-blockui/jquery.blockui.js"></script>
  <script src="../assets/js/alpha.min.js"></script>
  </section>
 </body>
</html>
```

SAMPLE INPUT AND OUTPUT

SAMPLE INPUT :

SAMPLE OUTPUT :