NATIONAL INSTITUTE OF TECHNOLOGY, TIRUCHIRAPPALLI-15

Department of Computer Applications

STUDENT MANAGEMENT SYSTEM

PROJECT WORK

Submitted By

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Under the guidance of

Dr. U. Vignesh

LIST OF CONTENTS

ACKNOWLEDGEMENT

The Completion of this undertaking could not have been possible without the participation and assistance of several persons who helped us directly or indirectly in this project work. We express our heart full and owe a deep sense of gratitude to my teacher and my faculty guide Dr. U. Vignesh,National Institute of Technology,Trichy for their sincere guidance, encouragement, suggestion, inspired and have contributed immensely to the evolution of our ideas on the project.

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The study has indeed helped us to explore more knowledgeable avenues related to my topic and we are sure it will help us in our future.

Thank you

MOHIT
MCA (I SEM)

Certificate of the principal

Date……..

Project Completion certificate

This is to certify that MOHIT , student of MCA (I semester) of National Institute Of Technology, has successfully completed the project work entitled "Student Management System" under the guidance of Dr. U. Vignesh is a bonafide piece of work carried out at National Institute Of Technology,Trichy.

The project entitled "Student Management System" developed by Mohit in the National Institute of Technology,Trichy and he/she has done his/her laboratory work during the tenure of the project with the guide to complete this project. All the prescribed certificates are attached after the completion of all the formalities of the project work as per schedule, including internal examination.

Place : Trichy
Date:

Signature of Principal
Seal of the Institute

DECLARATION

We Mohit student of National Institute of Technology,Trichy declare that the dissertation/project report submitted by us under the guidance of Dr. U. Vignesh is a bonafide work for Partial fulfilment of the requirement of the MCA (I semester) project work. We have incorporated all the suggestions provided by our guide time of time.

We further declare that to the best of our knowledge this dissertation contains our original work and does not contain any part of any work which has been submitted for the award of any degree either in this university or in any other university/Deemed university/Institute etc. Without proper citation and we will be fully responsible for any plagiarism found at any stage.

Name & Signature of the guide **Name & signature of the student**
Dr. U. Vignesh

INTRODUCTION

Student Management System is software which is helpful for students as well as the school authorities. In the current system all the activities are done manually. It is very time consuming and costly. Our Student Management System deals with the various activities related to the students.

There are mainly 3 modules in this software

- User module
- Student Module
- Course Module
- Batch Module

In the Software we can register as a user and user has of two types, student and administrator. Administrator has the power to add new user and can edit and delete a user. A student can register as user and can add edit and delete his profile. The administrator can add edit and delete marks for the student. All the users can see the marks.

SYSTEM DEVELOPMENT LIFE CYCLE

1 SYSTEM DEVELOPMENT LIFE CYCLE

The structured sequence of operation required imaging developing and making operational a new information system it's a cycle because the System will need replacement and Development, cycle will begin.

1.1 Phases of SDLC

System Analysis

System Design

Coding

System Testing

System Implementation

System Maintenance.

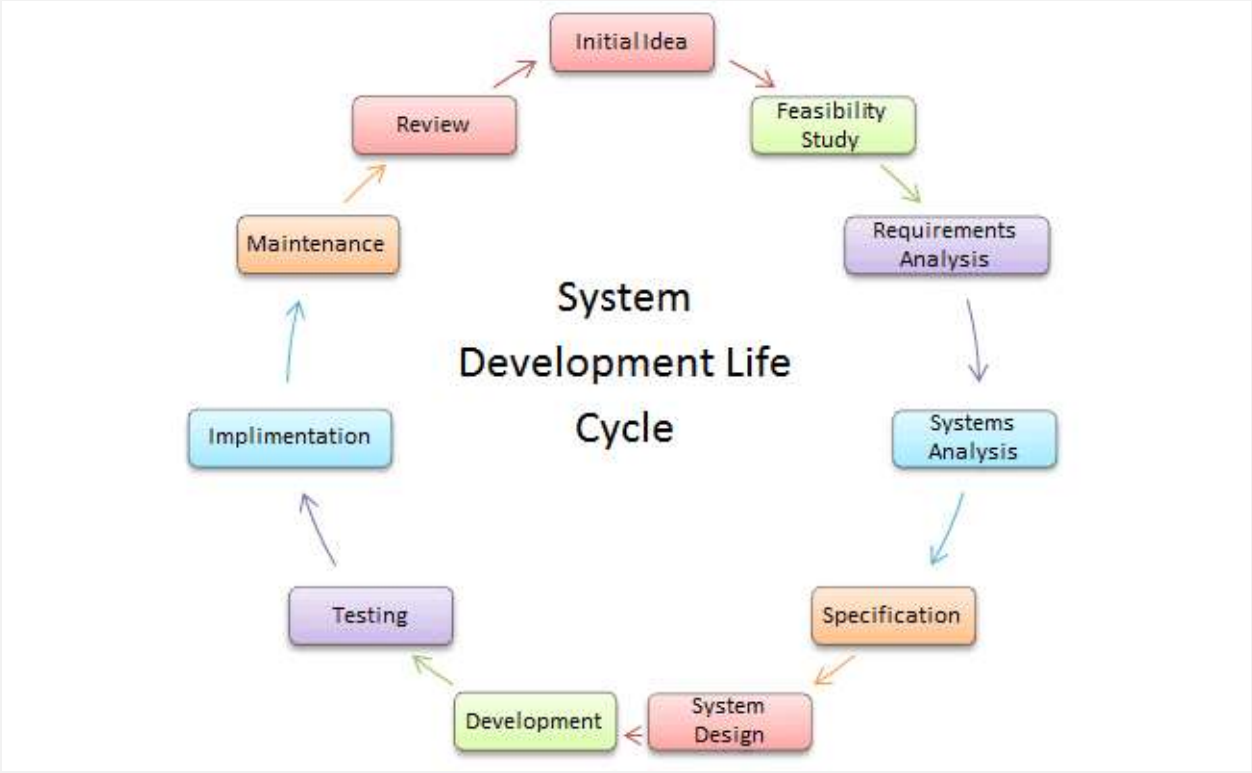
1.2 System Development Life Cycle

System development life cycle is a process of developing software on the basis of the

requirement of the end user to develop efficient and good quality software. It is necessary to follow a particular procedure. The sequence of phases that must be followed to develop good quality software is known as SDLC

The software is said to have a life cycle composed of several phases. Each of these phases results in the development of either a part of the system or something associated with the system, such as a test plan or a user manual. In the life cycle model, called the “spiral model,” each phase has well-defined starting and ending points, with clearly identifiable deliverables to the next phase. In practice, it is rarely so simple.

As with most undertakings, planning is an important factor in determining the success or failure of any software project. Essentially, good project planning will eliminate many of the mistakes that would otherwise be made, and reduce the overall time required to complete the project. As a rule of thumb, the more complex the problem is, and the more thorough the planning process must be. Most professional software developers plan a software project using a series of steps generally referred to as the software development life cycle. A number of models exist that differ in the number of stages defined, and in the specific activities that take place within each stage.



A GENERIC SYSTEM DEVELOPMENT LIFE CYCLE

1.2.1 Analysis of user requirements

During this stage, the problem is defined so that a clear understanding can be gained of what the system should do, i.e. what the inputs to the system are, what the output should be, and the operational parameters within which the system is expected to work. If the new system is to replace an existing system, the problem may be defined in terms of the additional or enhanced functionality that is required

.

1.2.2 Program design

In this stage, a solution to the problem is designed by defining a logical sequence of steps that will achieve each of the stated system objectives. Such a sequence of steps is often referred to as an algorithm.. Some of the methods used to define program algorithms are described later in this section, and include flowcharts and pseudo code. These tools allow the program designer to break a given problem down into a series of small tasks which the computer can perform to solve the problem. The user interface will also be designed during this stage, and will determine how input is obtained, how output is displayed, and what controls are available to

the user.

1.2.3 Program coding

This stage, sometimes known as the implementation stage, is where the algorithms are translated into a programming language, and tends to be the longest phase of the development life-cycle. In this case, we are using JSP to write the program.

1.2.4 Documentation and testing

The documentation of the program fulfils two main objectives. The first is to provide a technical reference to facilitate ongoing maintenance and development of the software itself. The second is to provide user documentation, i.e. a set of instructions that inform the user about the features of the software and how to use them. The aim of software testing is to find any errors ("bugs") in the program, to eliminate those errors (a process known as "debugging"), and as far as is reasonably practicable should be sufficiently rigorous to ensure that the software will function as expected under all foreseeable circumstances.

1.2.5 Operating and maintaining the system

Once the software has been "rolled out" and any necessary user training has been completed, it will be necessary to monitor the performance of the system over time to ensure that it is behaving as expected. The system will need to be maintained, and parts of it will need to be upgraded from time to time to handle evolving user needs or to cope with new problems. Eventually, as the system ages, it may no longer be able to adequately cope with the demands of a growing number of users, take advantage of advances in hardware technology, or adapt to a constantly changing environment. When this time comes, the system will need to be decommissioned and replaced by a new system. Hence, the software development life cycle will begin again.

SYSTEM ANALYSIS

EXISTING SYSTEM:

System Analysis is a detailed study of the various operations performed by a system and their relationships within and outside of the system. Here the key question is- what all problems exist in the present system? What must be done to solve the problem? Analysis begins when a user or manager begins a study of the program using existing system.

During analysis, data collected on the various files, decision points and transactions handled by the present system. The commonly used tools in the system are Data Flow Diagram, interviews, etc. Training, experience and common sense are required for collection of relevant information needed to develop the system. A good analysis model should provide not only the mechanisms of problem understanding but also the frame work of the solution. Thus, it should be studied thoroughly by collecting data about the system. Then the proposed system should be analyzed thoroughly in accordance with the needs.

System analysis can be categorized into four parts.

- ✓ System planning and initial investigation
- ✓ Information Gathering
- ✓ Applying analysis tools for structured analysis
- ✓ Feasibility study
- ✓ Cost/ Benefit analysis.

In the current system we need to keep a number of records related to the student and want to enter the details of the student and the marks manually. In this system only, the teacher or the school authority views the mark of the student and they want to enter the details of the student. This is time consuming and has much cost.

PROPOSED SYSTEM:

In our proposed system we have the provision for adding the details of the students by themselves. So, the overhead of the school authorities and the teachers is become less. Another advantage of the system is that it is very easy to edit the details of the student and delete a student when it found unnecessary. The marks of the student are added in the database and so students can also view the marks whenever they want.

Our proposed system has several advantages

- User friendly interface
- Fast access to database
- Less error
- More Storage Capacity
- Search facility
- Look and Feel Environment
- Quick transaction

All the manual difficulties in managing the student details in a school or college have been rectified by implementing computerization.

FEASIBILITY ANALYSIS

Whatever we think need not be feasible. It is wise to think about the feasibility of any problem we undertake. Feasibility is the study of impact, which happens in the organization by the development of a system. The impact can be either positive or negative. When the positives nominate the negatives, then the system is considered feasible. Here the feasibility study can be performed in two ways such as technical feasibility and Economical Feasibility.

TECHNICAL FEASIBILITY:

We can strongly say's that it is technically feasible, since there will not be much difficulty in getting required resources for the development and maintaining the system as well. All the resources needed for the development of the software as well as the maintenance of the same is available in the organization here we are utilizing the resources which are available already.

ECONOMIC FEASIBILITY:

Development of this application is highly economically feasible. The organization needed not spend much money for the development of the system already available. The only thing is to be done is making an environment for the development with an effective supervision. I f we are doing so, we can attain the maximum usability of the corresponding resources. Even after the development, the organization will not be in condition to invest more in the organization. Therefore, the system is economically feasible.

CONFIGURATION

HARDWARE CONFIGURATION:

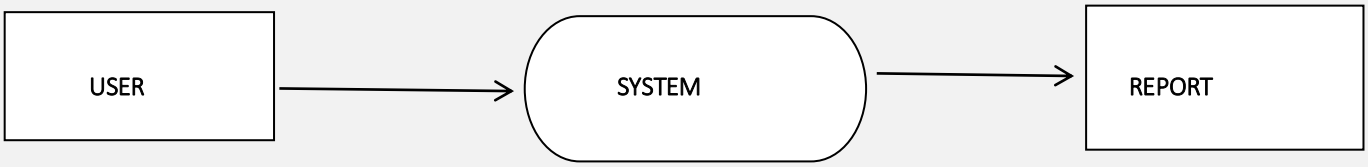
Processor	:	
RAM	:	1GB
Hard Disk	:	50GB
Monitor	:	
Key Board	:	

SOFTWARE CONFIGURATION:

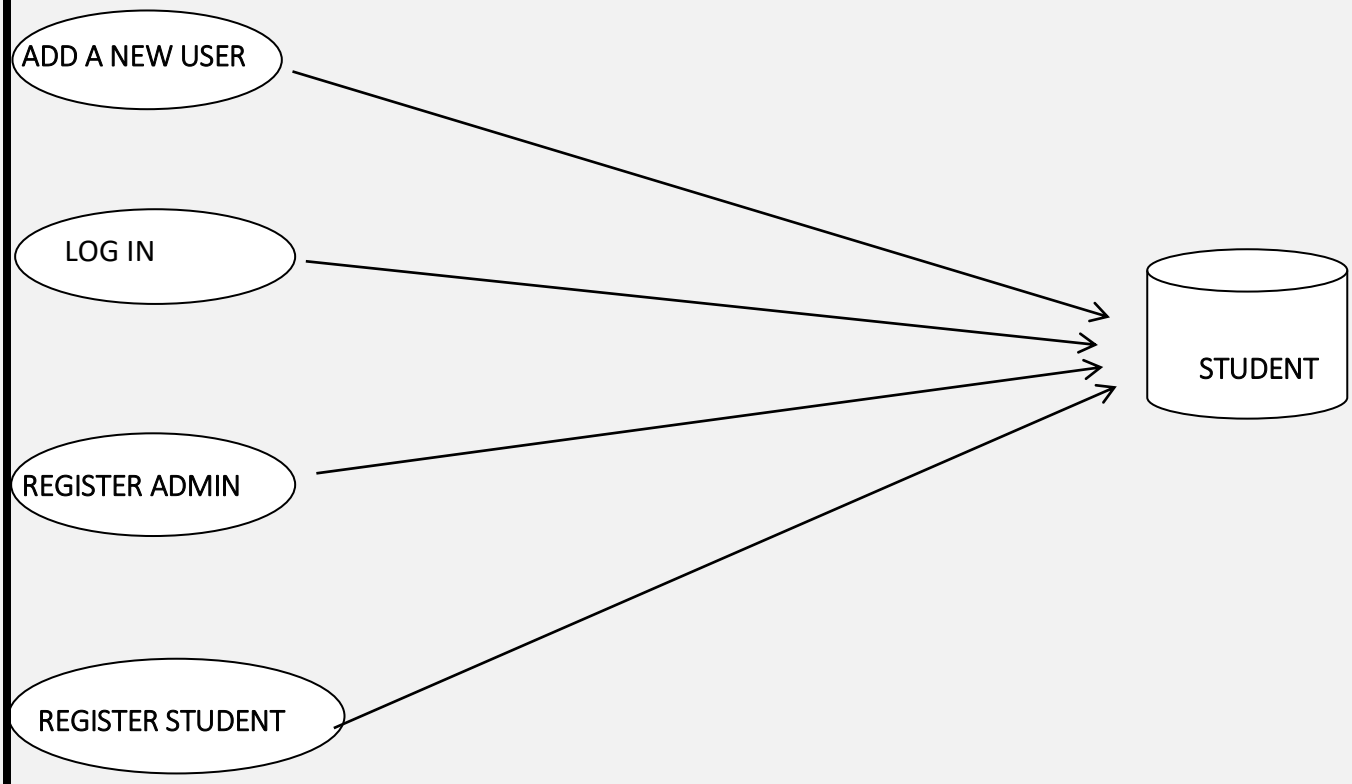
Operating System	: Windows 8.1, Linux
Language	: HTML, CSS, PHP, JavaScript
Database	: MySQL

DATA FLOW DIAGRAM

CONTEXT DIAGRAM

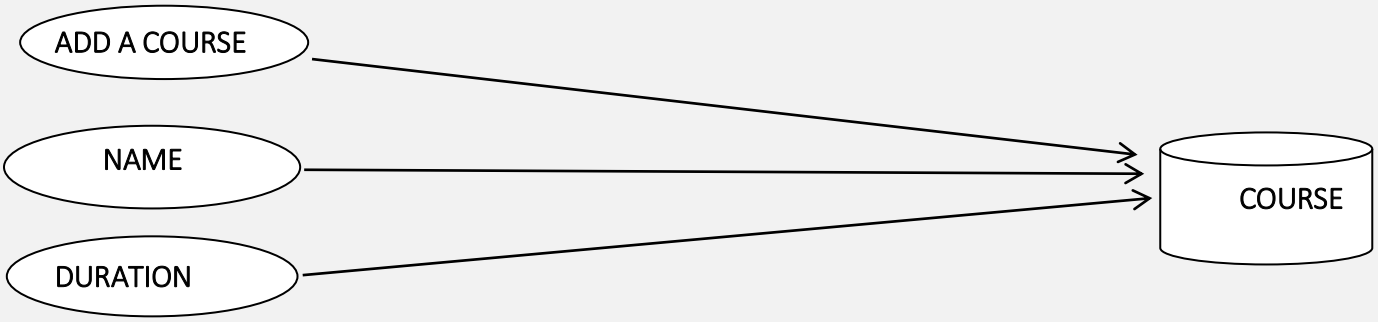


LEVEL-1



DATA FLOW DIAGRAM

LEVEL-2



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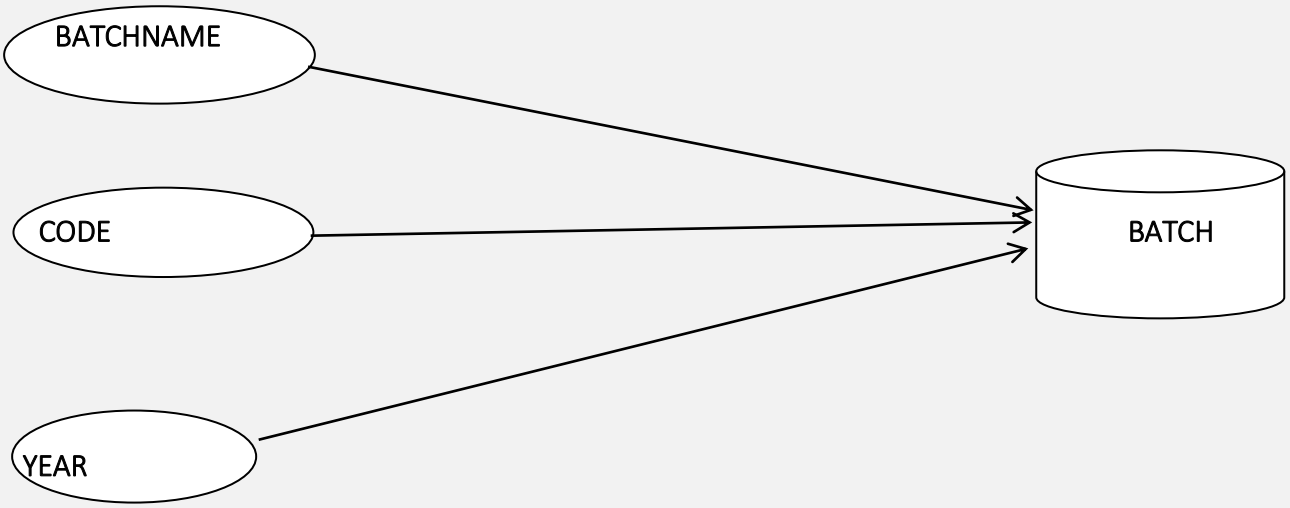
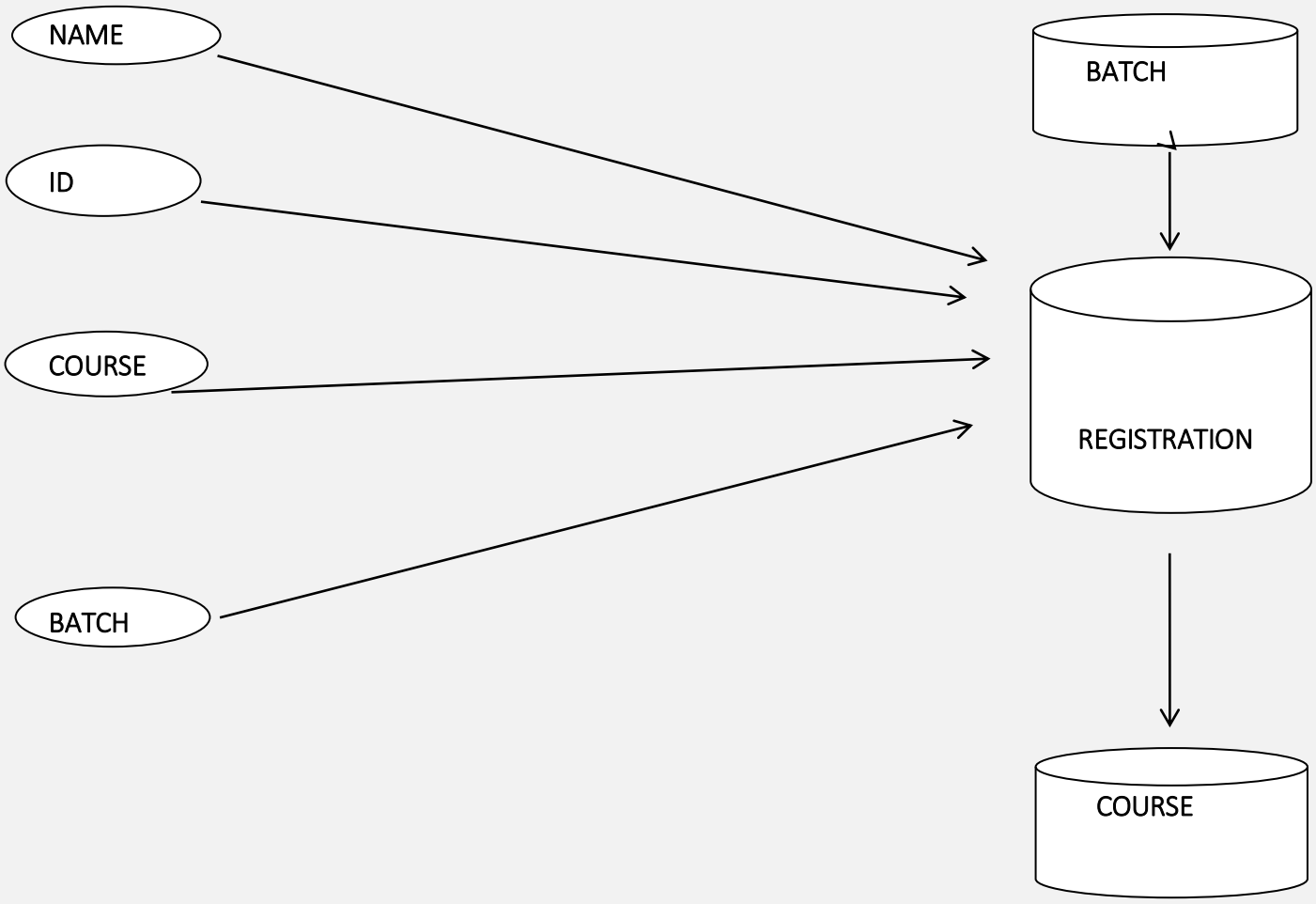
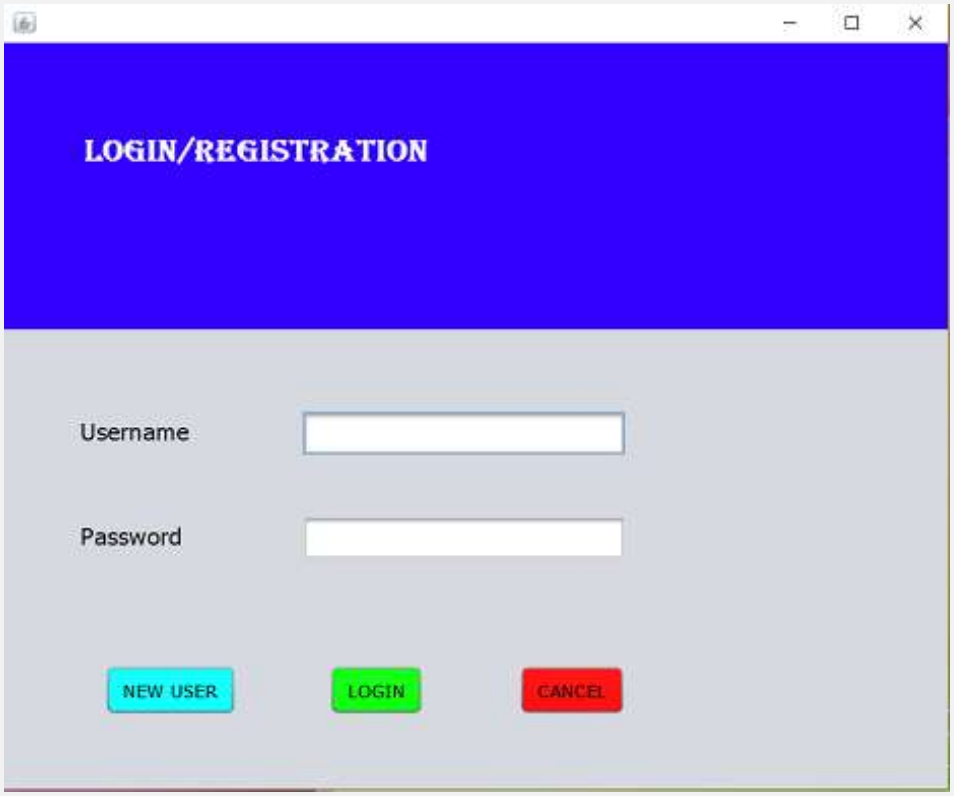


DATA FLOW DIAGRAM

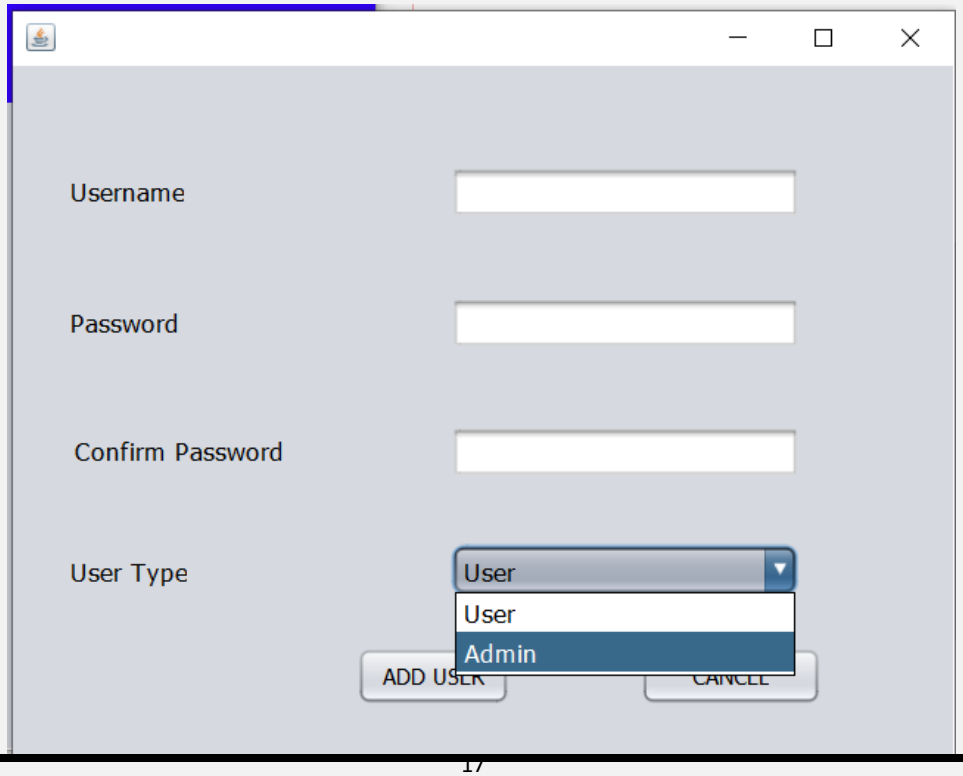


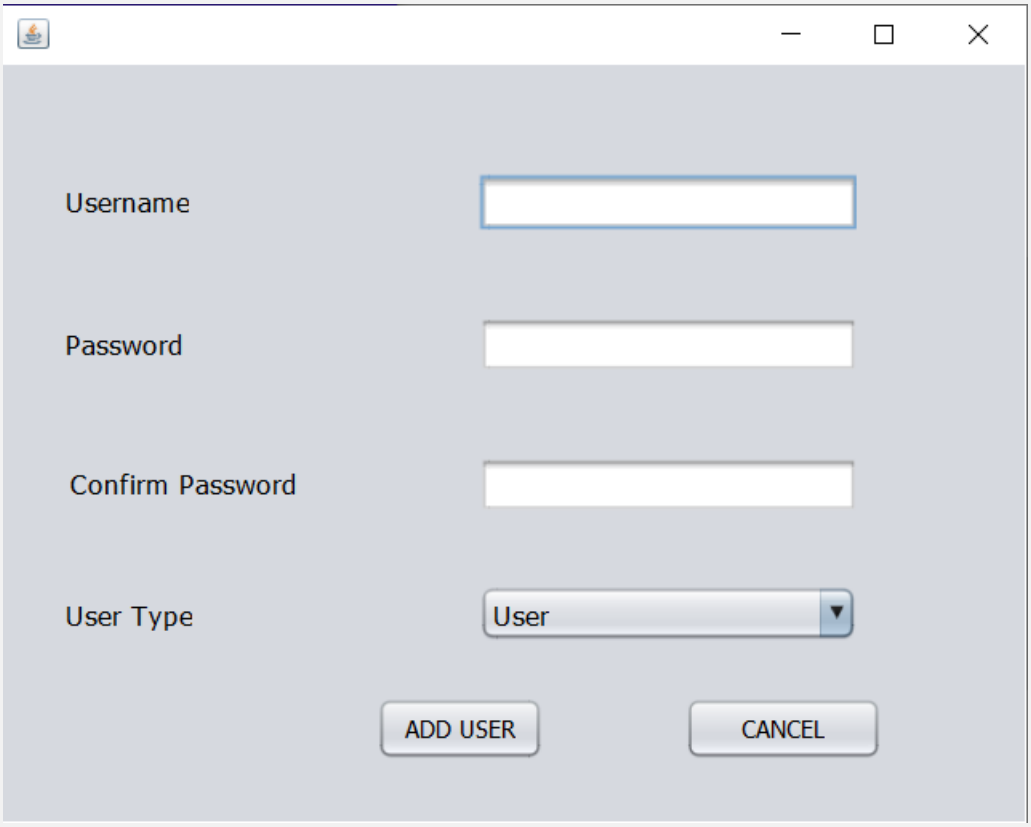
SOFTWARE INTERFACE

Login

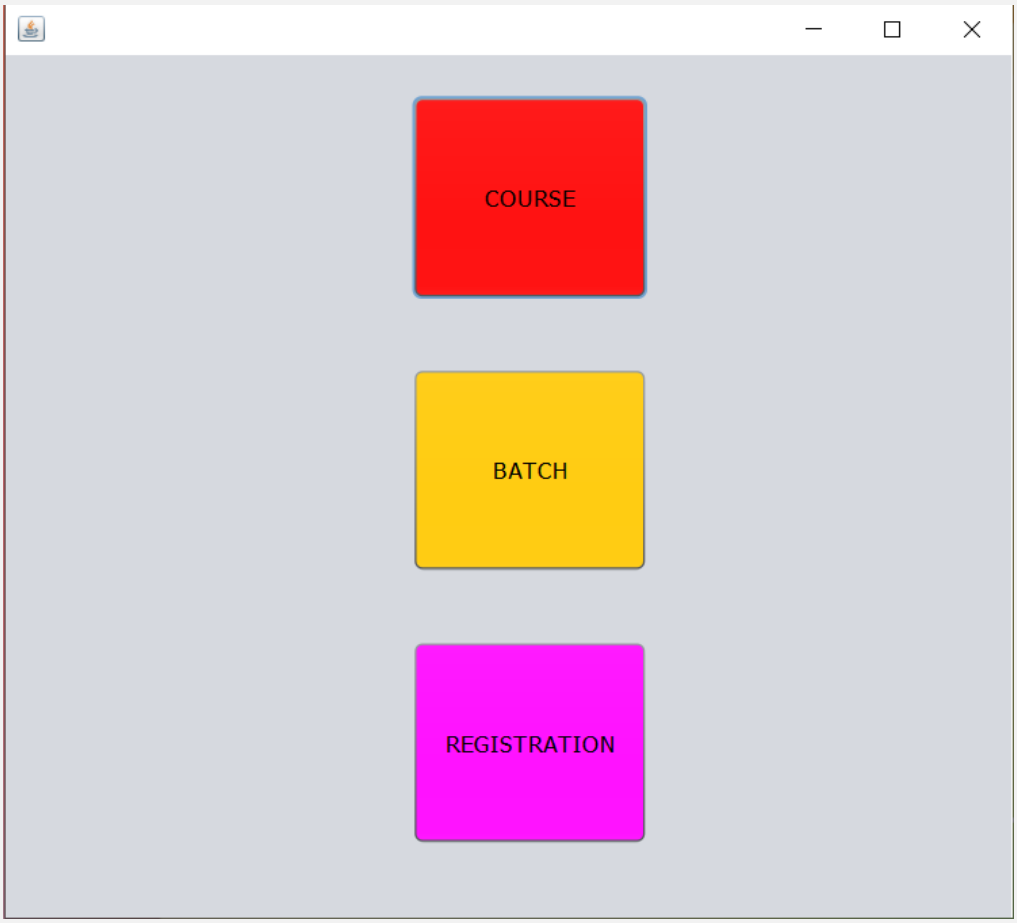


USER-TYPE

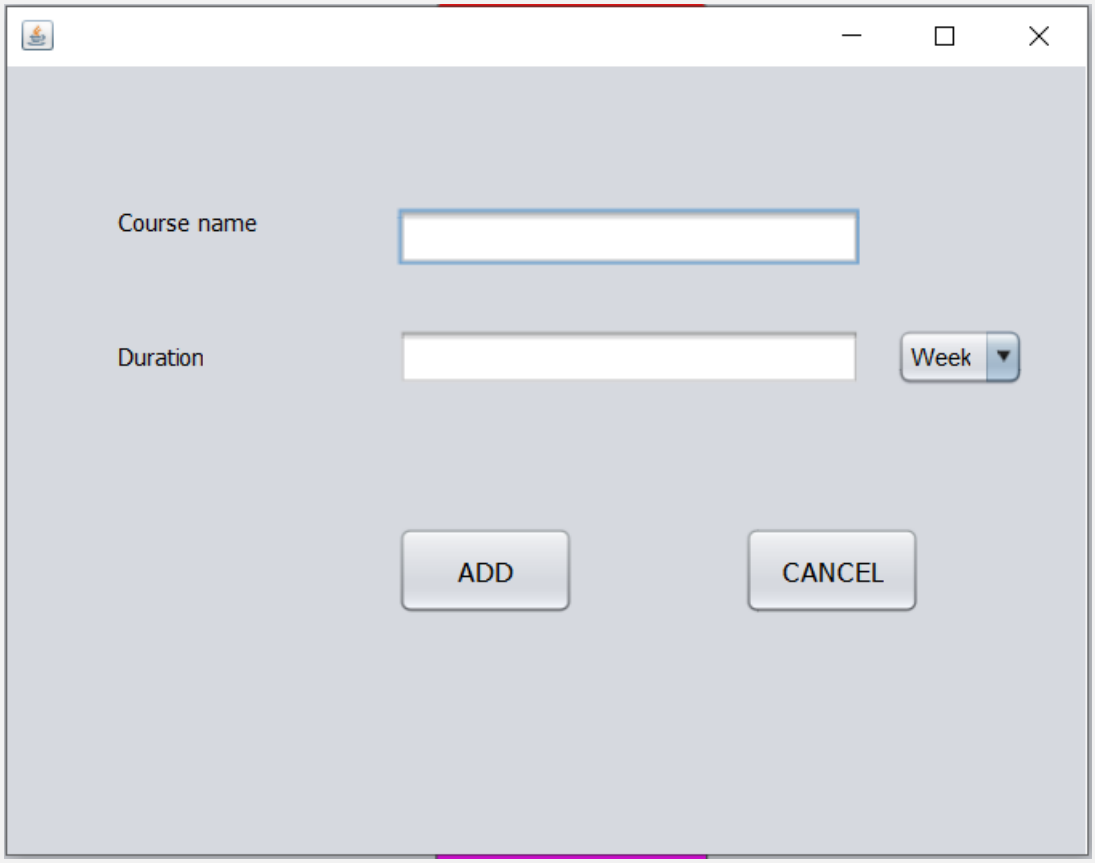



Username
Password
Confirm Password
User Type
User
ADD USER
CANCEL

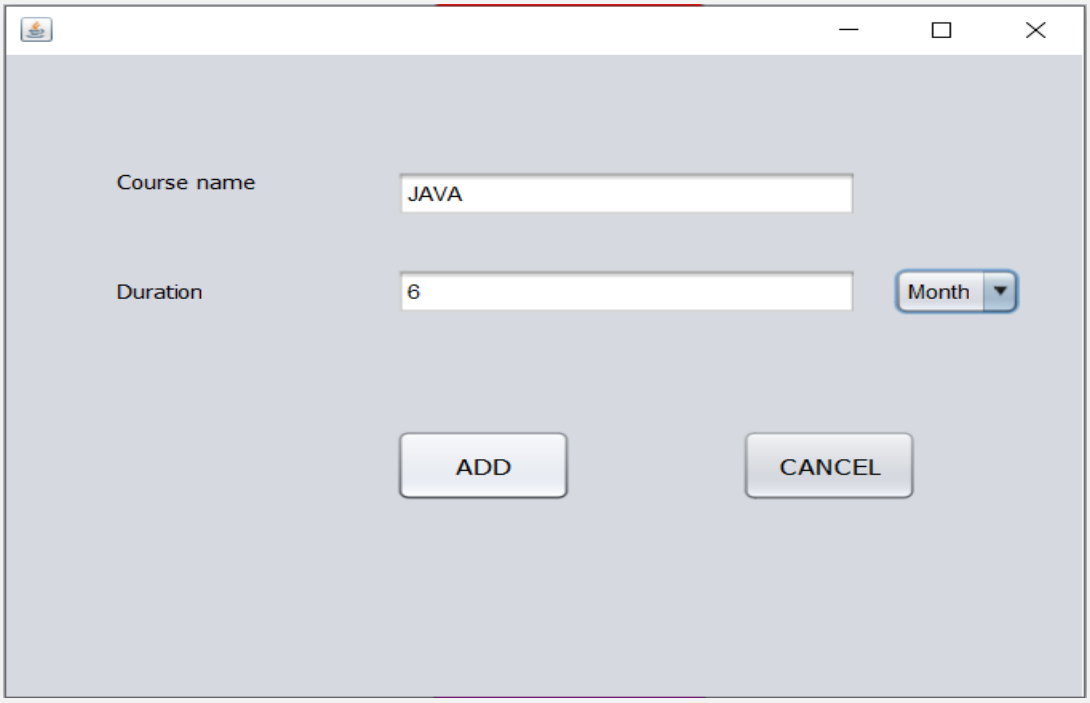
MENU


COURSE
BATCH
REGISTRATION

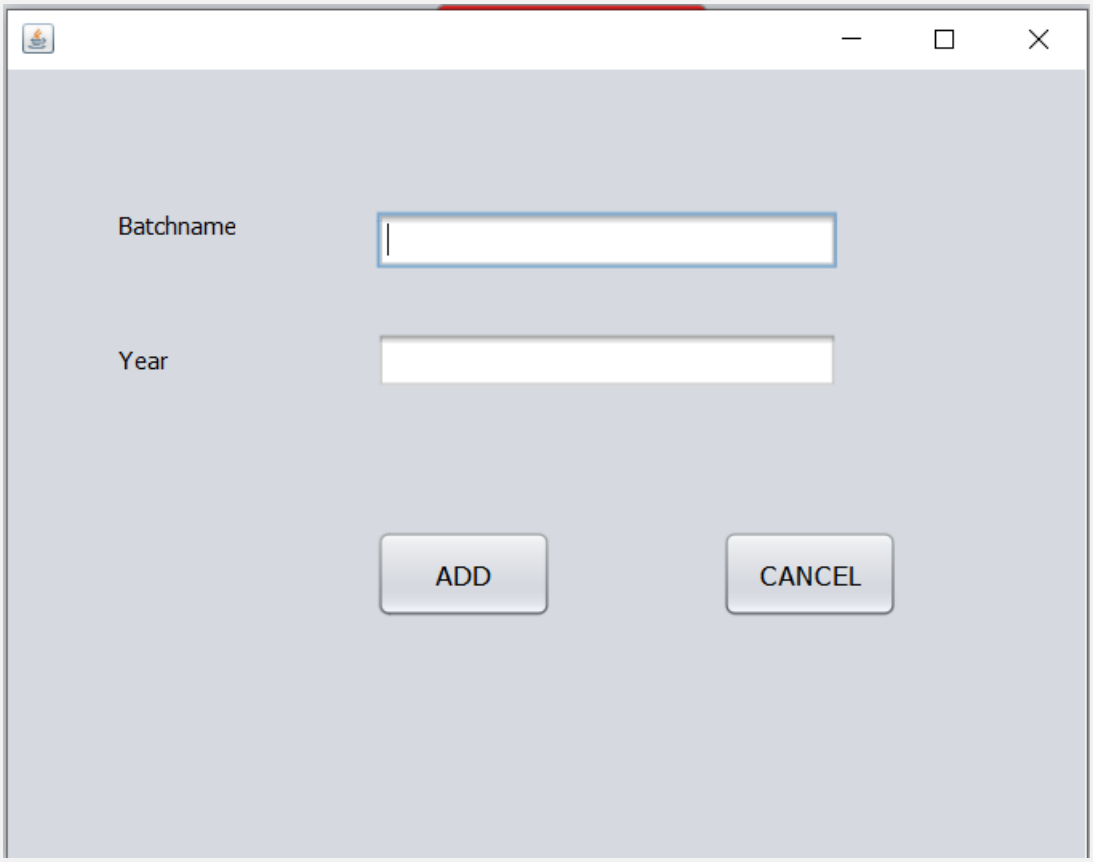
COURSE-IN



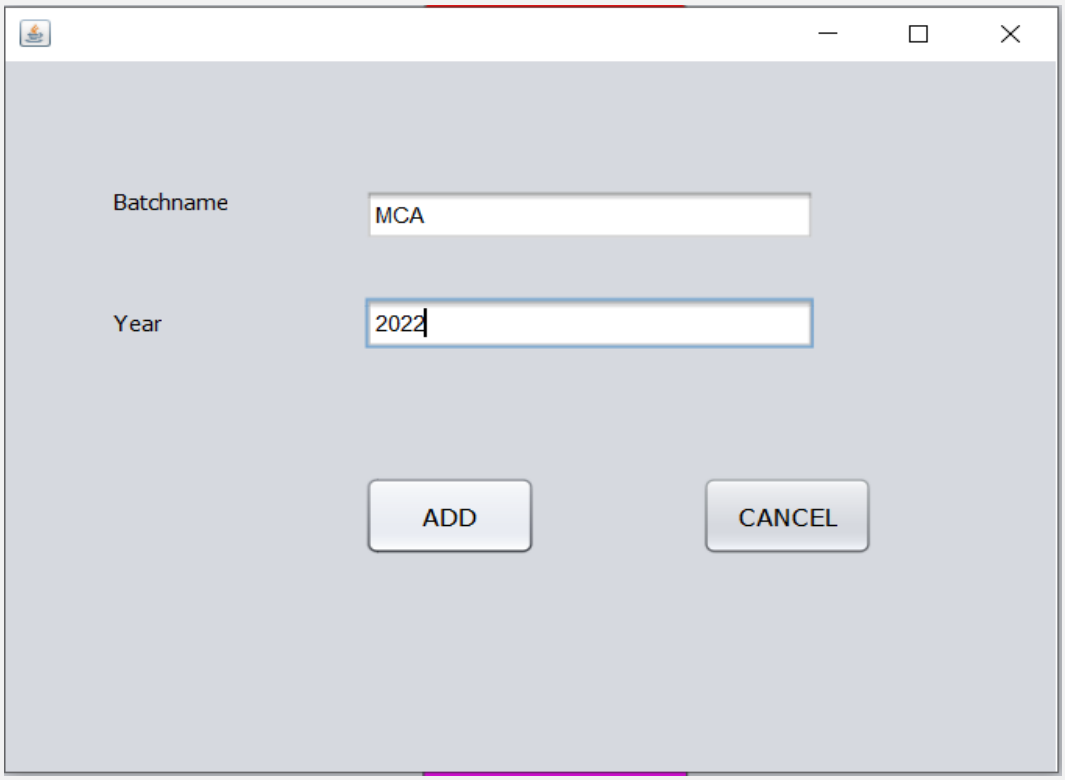
COURSE-ADD



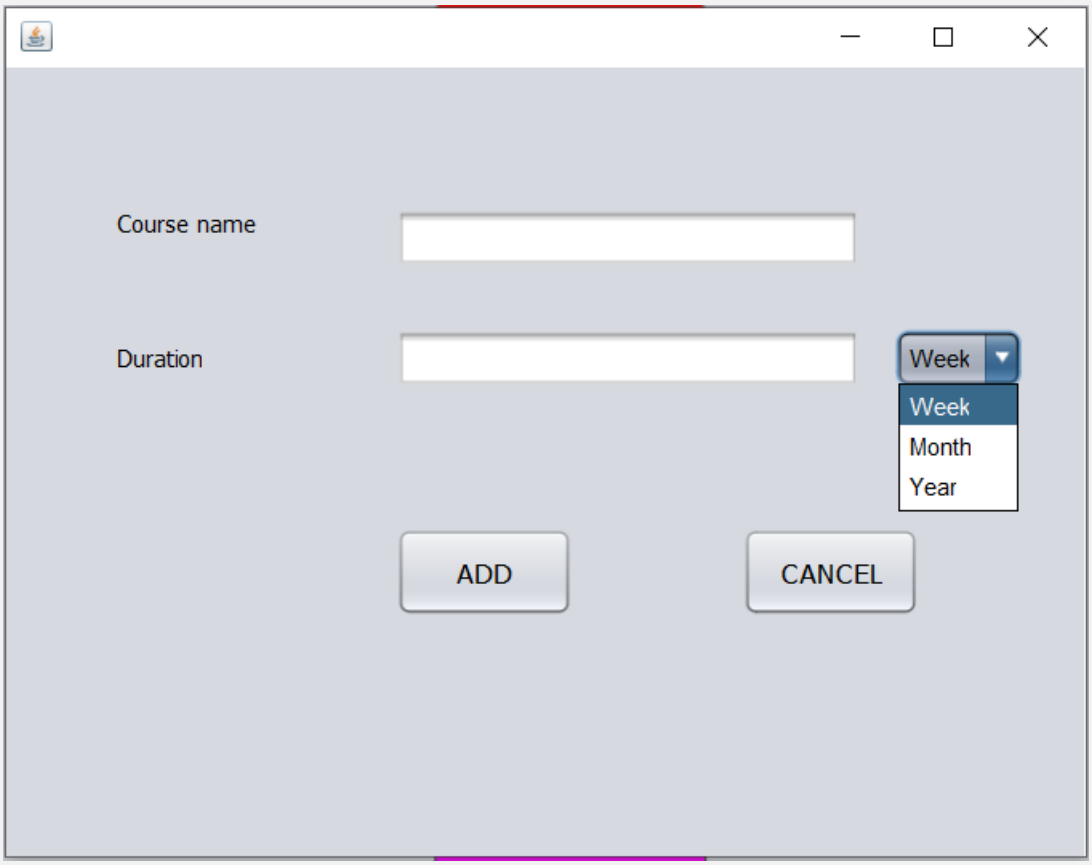
BATCH



ADD BATCH



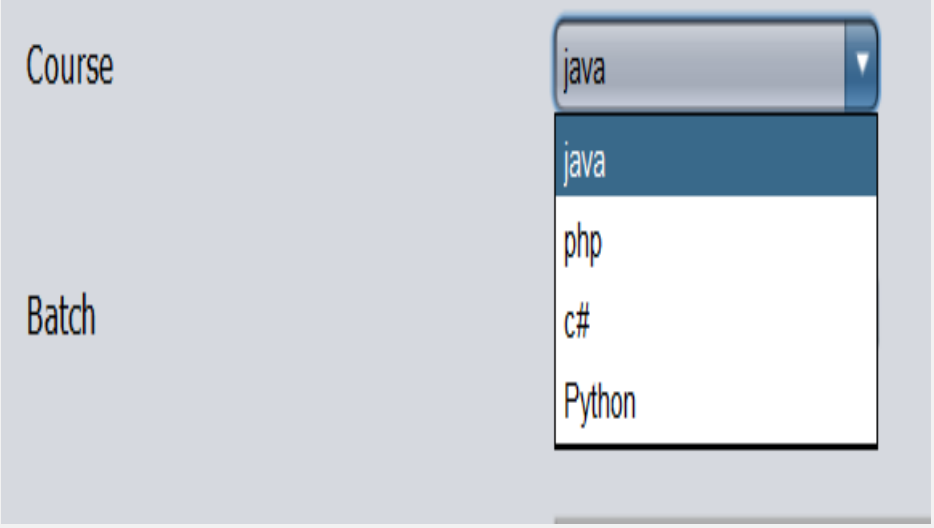
COURSE-DURATION



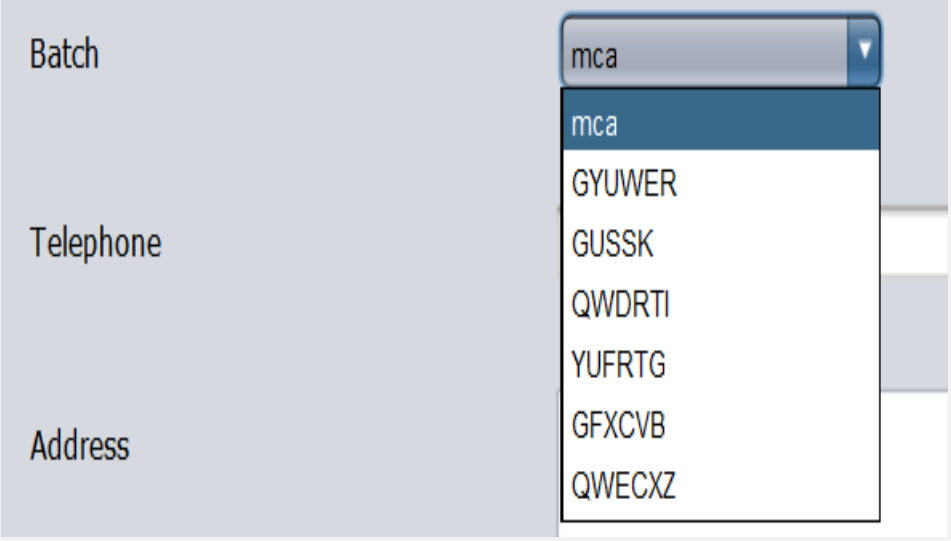
REGISTERED-USERS

	id	username	password	utype
Edit Copy Delete	1	jon	123	Admin
Edit Copy Delete	2	Mohit	qwerty	User
Edit Copy Delete	3	ankush	qwerty	Admin
Edit Copy Delete	4	karan	qwerty	User

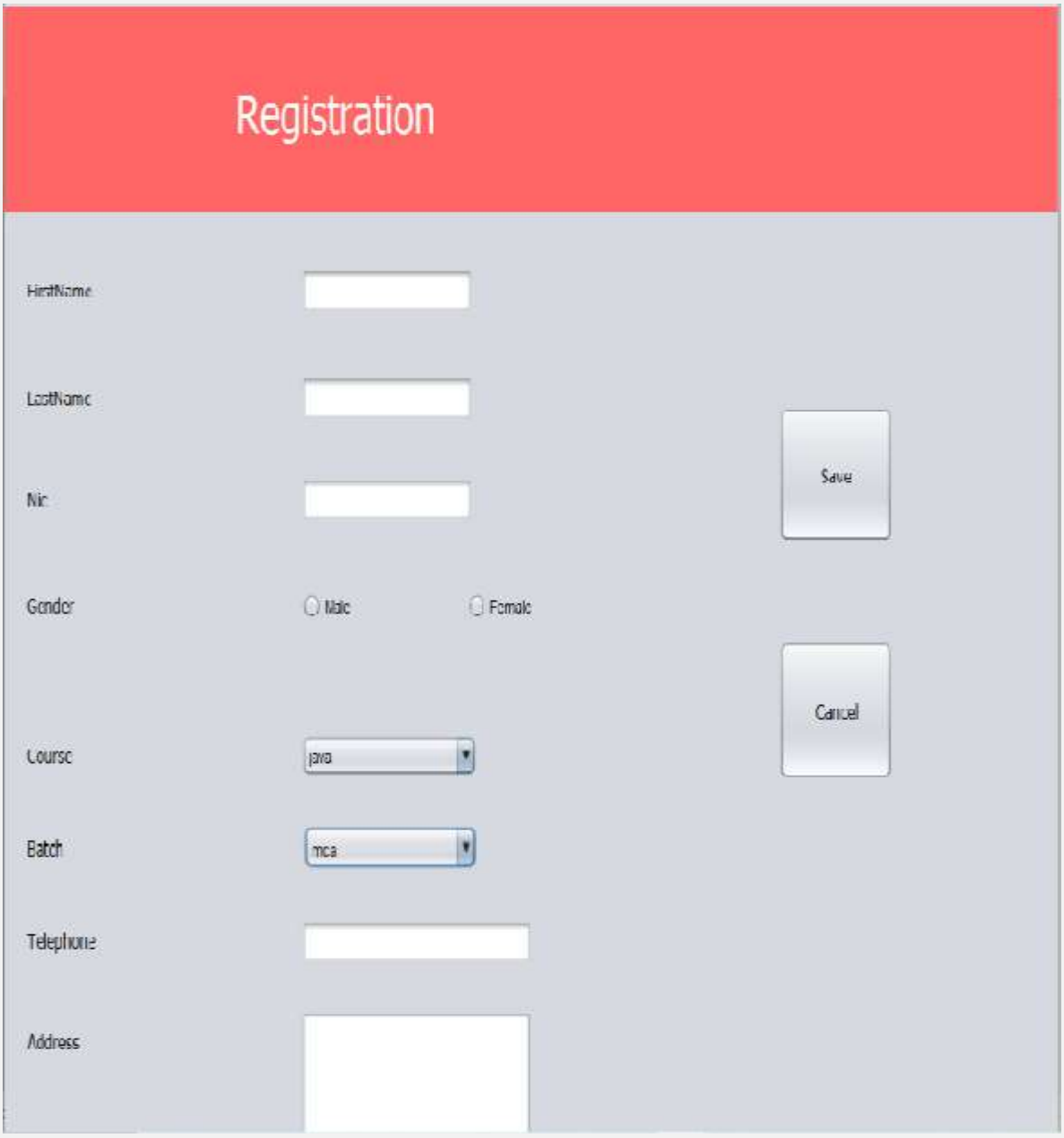
ADDED-COURSE



ADDED-BATCH



REGISTERATION FORM



SYSTEM DESIGN

INPUT DESIGN

Input design is the process of converting user-oriented input to a computer based format. Input design is a part of overall system design, which requires very careful attention. Often the collection of input data is the most expensive part of the system. The main objectives of the input design are …

1. Produce cost effective method of input

2. Achieve highest possible level of accuracy

3. Ensure that the input is acceptable to and understood by the staff.

INPUT DATA:

The goal of designing input data is to make entry easy, logical and free from errors as possible. The entering data entry operators need to know the allocated space for each field; field sequence and which must match with that in the source document. The format in which the data fields are entered should be given in the input form. Here data entry is online; it makes use of processor that accepts commands and data from the operator through a key board. The input required is analyzed by the processor. It is then accepted or rejected. Input stages include the following processes

- Data Recording
- Data Transcription
- Data Conversion
- Data Verification
- Data Control
- Data Transmission
- Data Correction

One of the aims of the system analyst must be to select data capture method and devices, which reduce the number of stages so as to reduce both the changes of errors and the cost. Input types, can be characterized as.

- External
- Internal
- Operational
- Computerized
- Interactive

Input files can exist in document form before being input to the computer. Input design is rather complex since it involves procedures for capturing data as well as inputting it to the computer.

OUTPUT DESIGN

Outputs from computer systems are required primarily to communicate the results of processing to users. They are also used to provide a permanent copy of these result for latter consultation. Computer output is the most important and direct source of information to the users. Designing computer output should proceed in an organized well through out the manner. The right output must be available for the people who find the system easy o use. The outputs have been defined during the logical design stage. If not, they should have defined at the beginning of the output designing terms of types of output connect, format, response etc.

Various types of outputs are

- External outputs
- Internal outputs
- Operational outputs
- Interactive outputs
- Turn around outputs

All screens are informative and interactive in such a way that the user can full fill his requirements through asking queries.

DATABASE DESIGN

The general theme behind a database is to handle information as an integrated whole. A database is a collection of interrelated data stored with minimum redundancy to serve many users quickly and effectively. After designing input and output, the analyst must concentrate on database design or how data should be organized around user requirements. The general objective is to make information access, easy quick, inexpensive and flexible for other users. During database design the following objectives are concerned: -

- Controlled Redundancy
- Data independence
- Accurate and integrating
- More information at low cost
- Recovery from failure
- Privacy and security
- Performance
- Ease of learning and use

SYSTEM IMPLEMENTATION

Implementation is the stage in the project where the theoretical design is turned into a working system. The implementation phase constructs, installs and operates the new system. The most crucial stage in achieving a new successful system is that it will work efficiently and effectively.

There are several activities involved while implementing a new project. They are

- End user training
- End user Education
- Training on the application software
- System Design
- Parallel Run and To New System
- Post implementation Review

End user Training:

The successful implementation of the new system will purely upon the involvement of the officers working in that department. The officers will be imparted the necessary training on the new technology.

End User Education:

The education of the end user start after the implementation and testing is over. When the system is found to be more difficult to understand and complex, more effort is put to educate the end used to make them aware of the system, giving them lectures about the new system and providing them necessary documents and materials about how the system can do this.

Training of application software:

After providing the necessary basic training on the computer awareness, the users will have to be trained upon the new system such as the screen flows and screen design type of help on the screen, type of errors while entering the data, the corresponding validation check at each entry and the way to correct the data entered. It should then cover information needed by the specific user or group to use the system.

Post Implementation View:

The department is planning a method to know the states of the past implementation process. For that regular meeting will be arranged by the concerned officers about the implementation problem and success.

SOFTWARE TESTING

Is the menu bar displayed in the appropriate contested some system related features included either in menus or tools? Do pull –Down menu operation and Tool-bars work properly? Are all menu function and pull-down sub function properly listed; Is it possible to invoke each menu function using a logical assumption that if all parts of the system are correct, the goal will be successfully achieved. In adequate testing or non-testing will leads to errors that may appear few months later.

This create two problems

1. Time delay between the cause and appearance of the problem.

2. The effect of the system errors on files and records within the system

The purpose of the system testing is to consider all the likely variations to which it will be suggested and push the systems to limits.

The testing process focuses on the logical intervals of the software ensuring that all statements have been tested and on functional interval is conducting tests to uncover errors.

CONCLUSION

Our project is only a humble venture to satisfy the needs in an Institution. Several user-friendly coding has also adopted. This package shall prove to be a powerful package in satisfying all the requirements of the organization.

The objective of software planning is to provide a frame work that enables the manger to make reasonable estimates made within a limited time frame at the beginning of the software project and should be updated regularly as the project progresses. Last but not least it is no the work that played the ways to success but ALMIGHTY

BIBLIOGRAPHY:

1) https://www.w3schools.com/html/
2) https://www.w3schools.com/php/default.asp