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Chapter I: Introduction

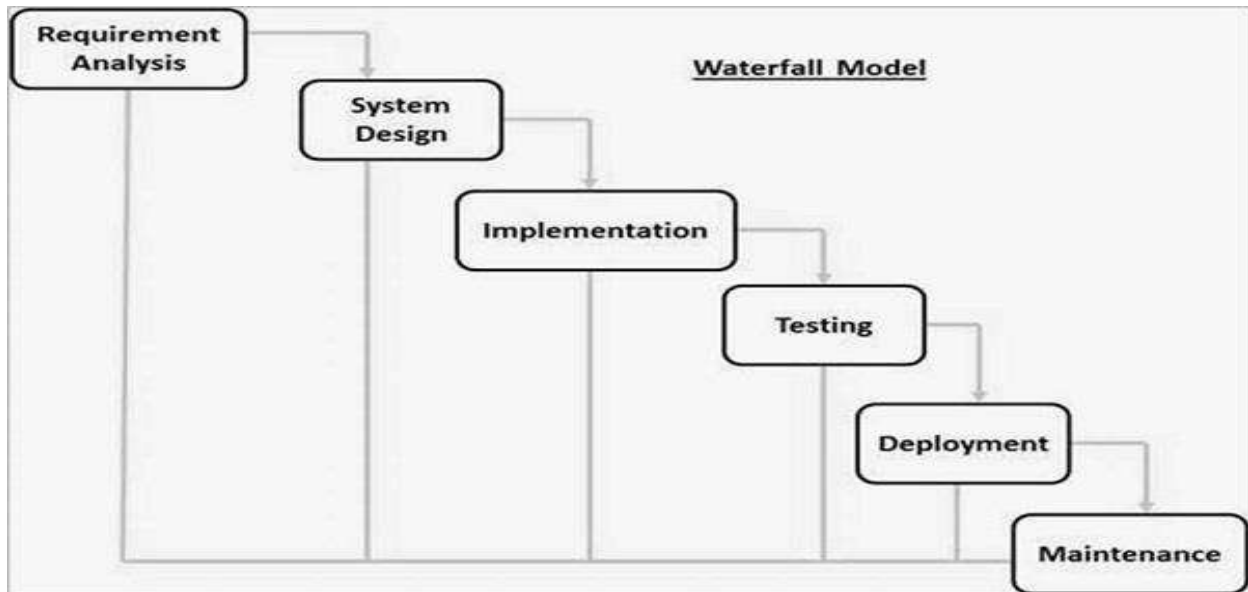
1.1 Introduction

School Management System is the system which manage students, Fees, teachers, classes, subjects, hostels and many more. Here, the user can use the features of CRUD and manage students, fees, bank, teachers, subjects, classes, streams, hostel, timetable, events, notices/announcement, exam result, fee structure, attendance. Login sessions can also be viewed from the admin panel. Now talking about all the main functions of the system that is the feature to add, edit, delete and view students, teachers, classes, hostels, streams, and management of Fees. While adding a student, the user has to provide full name, select gender, and date of birth, attach photos, registration number, select class, stream, and hostel, date of joining, category, academic year, total fees, advance fees, balance, and parents.

1.2 Objective

This is a web oriented application allows us to access the whole information about the school, staffs, students, facilities etc. This application provides a virtual tour of school. Here we will get the latest information about the students, members and staffs. This generic application designed for assisting the students of an institute regarding information on the courses, subjects, classes, assignments, grades and timetable. It also provides support that a faculty can also check about his daily schedule, can upload assignments, and notices to the students. Here administrator will manage the accounts of the student and faculties, makes the timetable, and upload the latest information about the school.

1.3 Methodology Development Model



The sequential phases in Waterfall model are –

Requirement Gathering and analysis – All possible requirements of the system to be developed are captured in this phase and documented in a requirement specification document.

- **System Design** – The requirement specifications from first phase are studied in this phase and the system design is prepared. This system design helps in specifying hardware and system requirements and helps in defining the overall system architecture.
- **Implementation** – With inputs from the system design, the system is first developed in small programs called units, which are integrated in the next phase. Each unit is developed and tested for its functionality, which is referred to as Unit Testing.
- **Integration and Testing** – All the units developed in the implementation phase are integrated into a system after testing of each unit. Post integration the entire system is tested for any faults and failures.
- **Deployment of system** – Once the functional and non-functional testing is done; the product is deployed in the customer environment or released into the market.
- **Maintenance** – There are some issues which come up in the client environment. To fix those issues, patches are released. Also to enhance the product some better versions are released. Maintenance is done to deliver these changes in the customer environment.

1.4 Tools and Technique

- a. Php
- b. Xampp
- c. Mysql yog
- d. HTML
- e. Bootstrap
- f. Sublime text
- g. Git hub
- h. Java Script
- i. Css

Php

Hypertext Preprocessor (or simply **PHP**) is a server-side scripting language designed for Web development, but also used as a general-purpose programming language. It was originally created by Rasmus Lerdorf in 1994,¹ the PHP reference implementation is now produced by The PHP Group. PHP originally stood for *Personal Home Page*,¹ but it now stands for the recursive acronym *PHP: Hypertext Preprocessor*.

PHP code may be embedded into HTML code, or it can be used in combination with various web template systems, web content management systems, and web frameworks. PHP code is usually processed by a PHP interpreter implemented as a module in the web server or as a Common Gateway Interface (CGI) executable. The web server combines the results of the interpreted and executed PHP code, which may be any type of data, including images, with the generated web page. PHP code may also be executed with a command-line interface (CLI) and can be used to implement standalone graphical applications.

Xampp

XAMPP is a free and open source cross-platform web server solution stack package developed by Apache Friends, consisting mainly of the Apache HTTP Server, MariaDB database, and interpreters for scripts written in the PHP and Perl programming languages. XAMPP stands for Cross-Platform (X), Apache (A), MariaDB (M), PHP (P) and Perl (P). It is a simple, lightweight Apache distribution that makes it extremely easy for developers to create a local web server for testing and deployment purposes. Everything needed to set up a web server – server application (Apache), database (MariaDB), and scripting language (PHP) – is included in an extractable file. XAMPP is also cross-platform, which means it works equally well on

Linux, Mac and Windows. Since most actual web server deployments use the same components as XAMPP, it makes transitioning from a local test server to a live server extremely easy as well.

MySQL

MySQL Workbench is a unified visual tool for database architects, developers, and DBAs. MySQL Workbench provides data modeling, SQL development, and comprehensive administration tools for server configuration, user administration, backup, and much more. MySQL Workbench is available on Windows, Linux and Mac OS X.

HTML

Hypertext Markup Language (HTML) is the standard markup language for creating web pages and web applications. With Cascading Style Sheets (CSS) and JavaScript, it forms a triad of cornerstone technologies for the World Wide Web.^[4]

Web browsers receive HTML documents from a web server or from local storage and render the documents into multimedia web pages. HTML describes the structure of a web page semantically and originally included cues for the appearance of the document.

HTML elements are the building blocks of HTML pages. With HTML constructs, images and other objects such as interactive forms may be embedded into the rendered page. HTML provides a means to create structured documents by denoting structural semantics for text such as headings, paragraphs, lists, links, quotes and other items.

Bootstrap

Bootstrap is a free and open-source front-end framework for designing websites and web applications. It contains HTML- and CSS-based design templates for typography, forms, buttons, navigation and other interface components, as well as optional JavaScript extensions. Unlike many web frameworks, it concerns itself with front-end development only.

JavaScript

JavaScript often abbreviated as JS, is a high-level, interpreted programming language. It is a language which is also characterized as dynamic, weakly typed, prototype-based and multi-paradigm.

Alongside HTML and CSS, JavaScript is one of the three core technologies of the World Wide Web. JavaScript enables interactive web pages and thus is an essential part of web applications. The vast majority of websites use it, and all major web browsers have a dedicated JavaScript engine to execute it.

Sublime Text

Sublime Text is a proprietary cross-platform source code editor with a Python application programming interface (API). It natively supports many programming languages and markup languages, and functions can be added by users with plugins, typically community-built and maintained under free-software licenses.

Github

GitHub is a web-based hosting service for version control using Git. It is mostly used for computer code. It offers all of the distributed version control and source code management (SCM) functionality of Git as well as adding its own features. It provides access control and several collaboration features such as bug tracking, feature requests, task management, and wikis for every project.

GitHub offers plans for both private repositories and free accounts which are commonly used to host open-source software projects.

Css

Cascading Style Sheets (CSS) is a style sheet language used for describing the presentation of a document written in a markup language like HTML. CSS is a cornerstone technology of the World Wide Web, alongside HTML and JavaScript.

CSS is designed to enable the separation of presentation and content, including layout, colors, and fonts. This separation can improve content accessibility, provide more flexibility and control in the specification of presentation characteristics, enable multiple web pages to share formatting by specifying the relevant CSS in a separate css file, and reduce complexity and repetition in the structural content.

1.5 Specification Requirement

1.5.1 External Interfaces

- This interface will be actual interface through which the user will communication with the application and perform the desired tasks.

Admin login

I.D:

Role: Admin wishes to login to the system

Precondition: Username and Password

Success end Condition: Main option of screen display

Failed end Condition: User has entered incorrect Username and

Password or both

Sign In Here [Sign Up](#)

Username

Password

[Forgot your password? Click here](#)

☐ Remember me

[Sign In](#)

Edit

ID:

Precondition: User has successfully navigated to the
search result

Success end Condition: User has successfully made the
changes

1.To edit user records in the data base, first search the record you want to edit then click on 'edit' button.

2.Edit the particulars user that you want to change and click on' Save' button.

Members

[+ Add New Member](#)

Search members in All fields Group anonymous Status Any Find Reset

Username	Group	Sign up date	Status
guest	anonymous	05/02/2018	Active

Previous Displaying members 1 to 1 of 1 Next

Key:

- Edit member details
- Delete member
- Activate new/banned member.
- Ban (suspend) member.
- View all data records entered by member.
- Send an email message to member.

1.5.2 Software Product Features

School Management System

Login Information System

- Description
 - The system will maintain the login information of its user to enter in to the software
- Validating Checks
 - Administrator need to login the unique id and password.
 - Contact number should have maximum 10 digits.
 - All the details must be fill up.
 - Email address should be in the proper format.
- Sequencing information
 - Login information should be filled before the user allowed.
- Error Handling
 - If user doesn't filled up validate information then the system display error message for user and request to enter the validate information.

Performance required

- Security
 - System should be Protected from unauthorized access Where the validate Username and Password are required so no other can access.

Logical Database

branch

Column	Type	Null	Default	Links to	Comments	MIME
id (<i>Primary</i>)	int(10)	No				
Name	varchar(40)	No				
AccountNumber	varchar(40)	No				

Indexes

Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
PRIMARY	BTREE	Yes	No	id	3	A	No	

classattendance

Column	Type	Null	Default	Links to	Comments	MIME
id (<i>Primary</i>)	int(10)	No				
Subject	int(10)	No				
Student	int(10)	No				
RegNo	int(10)	Yes	NULL			
Class	int(10)	Yes	NULL			
Stream	int(10)	Yes	NULL			
Attended	varchar(40)	Yes	NULL			
Date	date	Yes	NULL			

Data Design

Data Model: A database model is a type of data model that determines the logical structure of a database and fundamentally determines in which manner data can be stored, organized and manipulated.

Level

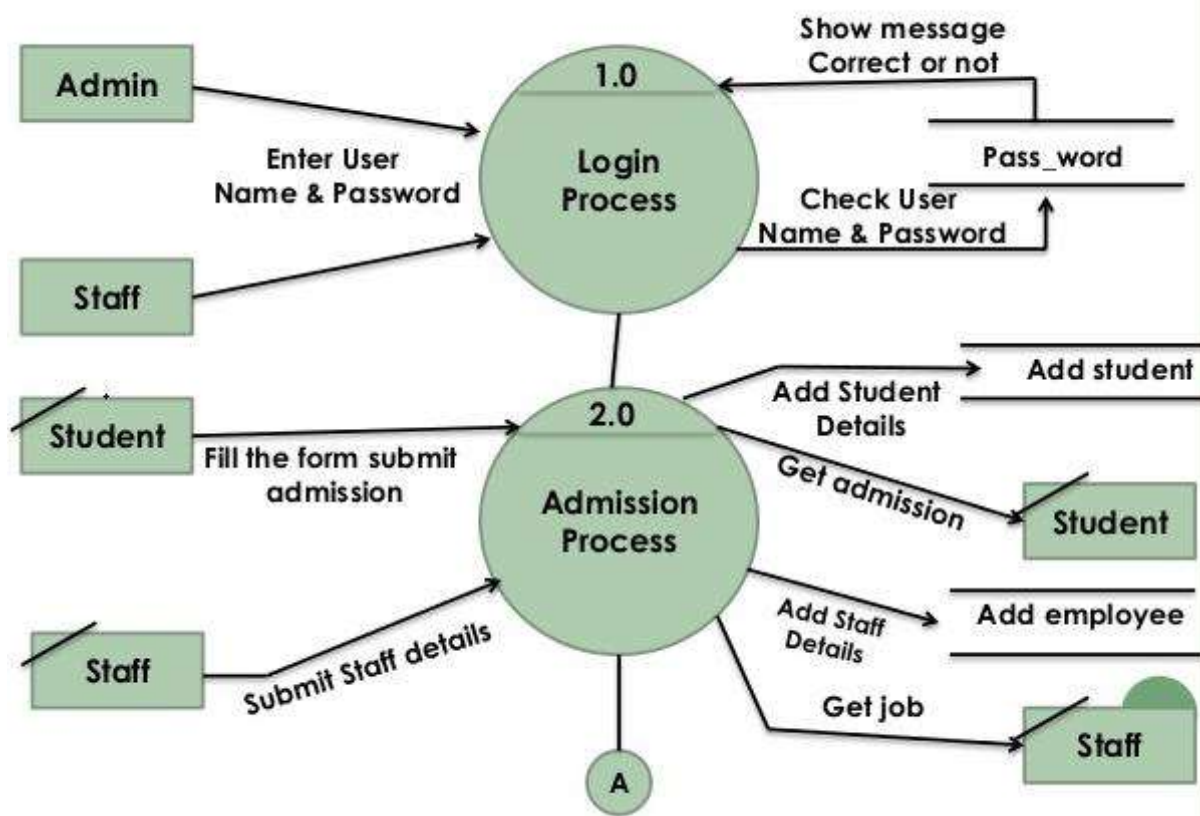


Figure: Data flow