

SYNOPSIS

PHRONTISTRY OVERSEE

A Project Report

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CHAPTER-1

Introduction to Project:

1.1 PHRONTISTERY OVERSEE

- The “College Website” that has been developed to override the problems prevailing in the practicing manual system.
- It is a user friendly “College Website” that can lead to error free, secure, reliable and fast management system.
- It can assist the user to concentrate on their other activities rather than to concentrate on the record keeping.
- The main motive of this website is the interaction between teachers and students.
- This system also come with the remote access features so, that one can manage their workforce anytime, at all the times. These systems will ultimately allow you to better manage resources.

1.2 Abstract:

The purpose of college website is to automate the existing manual system by the help pf computerized equipment and full-fledged computer software, fulfilling their requirements, so that their valuable data/information can be stored for a longer period with easy accessing a manipulation of the same. Basically the project describes how to manage for good performance and better services for the students and the teachers as well. This will also maintain the computerized records without redundant entries. That means one need not to be distracted by information that is not relevant, while being able to reach the information.

1.3 Why we need it?

- In the offline system, it is an overhead to keep the records related to the faculty, students and parents on the papers.
- Sometimes it is not easy to provide the information to each and every one. With the help of this website teachers can upload any of the information and vice-versa.
- Work can be given to the students by their teachers and the students can also revert their work online. And it is easy to maintain the record of their work.

- At the end of week or a month one can also generate the report of the students and share that with their parents as well.

1.4 Objectives:

- The main objectives of this project is to manage the details of students and the teachers.
- It manages all the information about the students and the teachers.
- Online attendance is taken.
- Teachers can upload the notes and other study material to help the students. They can also upload the video of their lectures so students can take that advantage too.
- Online assignments, tests and can also be taken by the teachers so that they check the performance of the students.
- Students also revert their work online with the help of this website.

1.5 Modules used in this project:

- Admin
- Teachers
- Students

1.5.1 ADMIN:

- Admin is the one who controls whole system, every person that is involved in this project.
- Admin has the power to create, update or delete any record of the system.
- Admin will be able to view the profile of any other user in the system.
- Whenever a student is registered into the college, a class and the related section will be assigned by the admin to the student.
- Assigning timetables to the teachers and students will be the admin's responsibility.
- The admin will approve the leave application of the teachers and students.

1.5.2 TEACHER:

- Mark the attendance:

The teacher can take the attendance of the students. He/she just has to enter the class and their roll no into the portal and the whole list of the registered students of the class will be displayed.

- Assign and check the work
- Upload the notes and video lectures
- View student profile
- Generate the reports of the students

1.5.3 STUDENT:

- View Timetable
- View the notes and the videos uploaded by teachers
- View and upload the work
- View the marks of their works
- View their report cards

1.6 Key Features:

- Multi-user account system
- Responsive user interface
- Homework documentation
- Class routine schedule
- Profile system
- Daily attendance
- Notes and video lectures
- Generate reports

1.7 Advantages:

- Computerization
- Automation
- Easy interaction

CHAPTER -2

INTRODUCTION TO TECHNOLOGIES

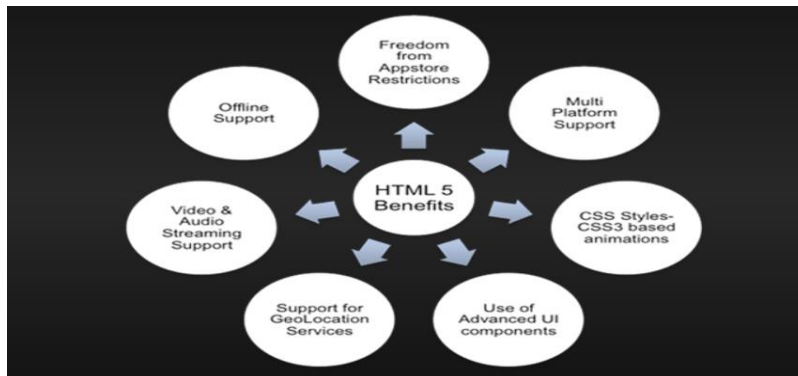
2.1 HTML

- HTML stands for Hyper Text Markup Language. It is a language for specifying how a text and graphics appear on the web page.
- The pages are actually stored on the computer that is hosting the website and the page is sent to the browser.
- A markup language is a set of markup tags and these tags describes the document content and these documents contains the html tags and the plain text.
- Html code is stored in a simple file that has either an .htm or .html filename extension.
(For example: index.html)



HTML TAGS:

HTML tags are the keywords or the tag names surrounded by the angle brackets like<html>. We use various types of tags in HTML i.e. PAIRED AND UNPAIRED tags.



2.2 CSS

CSS stands for CASCADING STYLE SHEET. That contains the rules for presentation of HTML. Cascading style sheets are used to customize the HTML files. It defines how to display HTML elements. (For example: specify the colors, fonts, spacing etc. for the entire document)

Style rules are defined using the tags. `<style>...</style>`



A CSS file allows to separate web sites HTML content from its style.

Types of CSS:

- Inline CSS (Priority level- High)
- Internal CSS (Priority level- Medium)
- External CSS (Priority level- Low)

Selectors: We have four selectors used in the internal and external CSS:

ID selectors: ID selector uses a hashtag (#) at the beginning. (For example: #id-name)

Class selector: Class selectors uses a dot (.) at the beginning. (For-example: .class-name)

Tag name: Tag selectors can be ant HTML tag, such as body, a, p, div, section or span.

Compound and Pseudo code selectors: A compound selector can mix the previous three types using more than one class, ID, and/or a tag. This type of selector has a higher priority than the other methods.

2.3 JavaScript

- JavaScript is a scripting language most often used for client-side web development.
- When JavaScript was created, it initially had another name: “Live Script”. Which is initially created to make web-pages alive.
- JavaScript is an implementation of the ECMA Script standard.
- JavaScript supported in the browsers typically support additional objects.
- JavaScript is a case-sensitive scripting language.



To insert a JavaScript into an html page, use the `<script>` tag.

The `<script>` and `</script>` tag tells where the JavaScript starts and ends.

JavaScript was created first in the place of DOM manipulation. Earlier websites are mostly static, after JavaScript was created dynamic web sites are made. Functions in JavaScript are objects. They may have properties and methods just like another objects. They can be passed as arguments in other functions. Performs form validation although the forms are created using HTML.

Example: `<head>`

`<script src = “path”></script>`

`</head>`

(Path is given by the name of the file with the extension .js)

2.4 TYPE SCRIPT

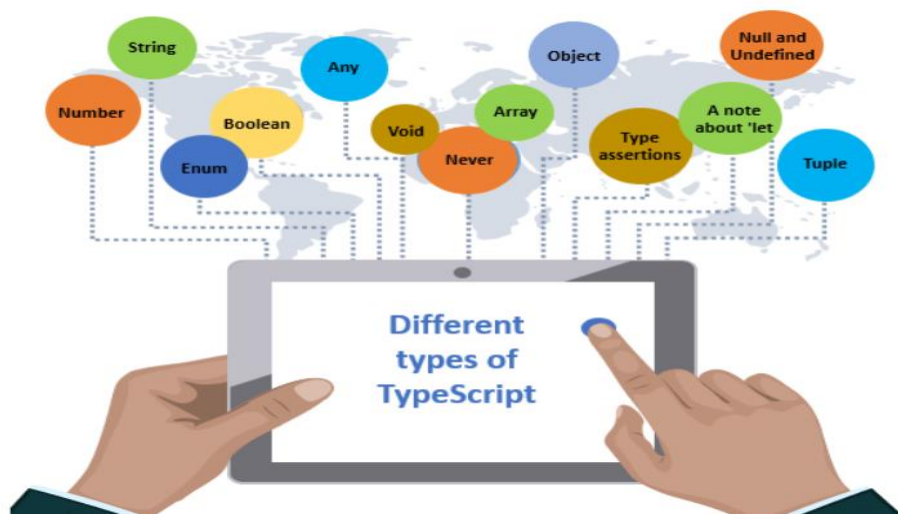
Type Script is a super-set of a JavaScript and it lets you write JavaScript the way you really want to, that complies to plain JavaScript. It means that it adds additional syntax on the top of basic JavaScript.

Type Script is a JS for application scale document. As we are working on a framework i.e. ANGULAR, Angular is itself written in Type Script.



Type Script features:

- Data Types Supported
- Optional Static Type Annotations
- Classes
- Interface
- Modules
- Arrow Expressions
- Type Assertions
- Source File Dependencies

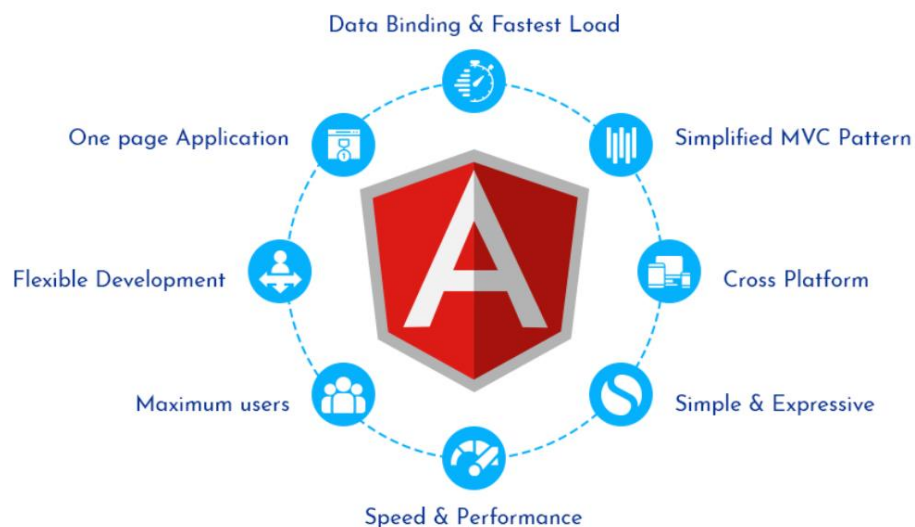


2.5 ANGULAR

- Angular is a platform and a framework for building single-page client applications using HTML and Type Script. Angular itself is written in Type Script and also called as Google's JavaScript.
- Angular is a structural framework for dynamic web applications. And it use the components for building a structural and scalable web applications.
- It is a collection of web-integrated libraries that cover a wide variety of features including routing, forms management, client-server communication and more.
- Angular is designed to make updating as easy as possible, so you can take advantage of the latest developments with a minimum efforts.



- Angular helps to build interactive and dynamic SPA with its compelling features including template, two way binding, modularization, Restful API handling, dependency injection and AJAX handling.



2.6 MATERIAL DESIGN AND SCSS

2.6.1 MATERIAL DESIGN:

- Material is a design system created by google to help teams build high-quality digital experiences for android, ios, flutter, and the web.
- Material design is a visual language that synthesizes classic principles of good design with the innovation and possibility of technology and science.
- Material design is inspired by the physical world and its textures, including how they reflect light and cast shadows. Material surfaces reimagine the mediums of paper and ink.
- **Material Components**
- **Material Theming**
 - Color
 - Typography
 - Shape

2.6.2 SCSS:

Officially described as “CSS with superpowers,” SCSS (or Sass) offers a way to write styles for websites with more enhanced CSS syntax. In general, browsers do not know how to process SCSS features, such as functions, mixins, and nesting. We’ll need to convert them to regular CSS files to run them in the browser.



SCSS syntax is similar to CSS, so it’s easy to explain the advancements for someone who already knows CSS.

2.7 EXPRESS SERVER

Express is a web application framework for node.js that allows you to spin and robust APIs and web servers in a much easier and cleaner way. It is a lightweight package that does not obscure the core node.js features.

Installation: Express is very simple to install. Simply install it with npm as you would with any package.

```
$ npm install express --save
```

Why use express:

Before we start with mechanism of using express as the backend framework, let us first explore why we should consider it using or the reasons of its popularity.

One big reason for using express is that the framework is minimal and unopinionated. By this, it means, that with Express you can structure the app any way you want.

- Express lets you build single page, multi-page, and hybrid web and mobile applications. Other common backend use is to provide an API for a client (whether web or mobile).
- It comes with a default template engine, Jade which helps to facilitate the flow of data into a website structure and does support other template engines.
- It supports MVC (Model-View-Controller), a very common architecture to design web applications.
- It is cross-platform and is not limited to any particular operating system.
- It leverages upon Node.js single threaded and asynchronous model.

Features of using express:

- Scale our applications quickly
- JavaScript is easy to learn
- We can use same language to code the frontend
- Less developer cost to maintain the app
- Community support

2.8 MONGO DB

Mongo DB is a non-relational document database that provides support for JSON-like storage. The Mongo DB database has a flexible data model that enables you to store unstructured data, and it provides full indexing support, and replication with rich and intuitive APIs.

Mongo DB was designed to work with commodity servers. Now it is used by company of all sizes across all industry.

It is a cross-platform, document oriented database that provides, high performance, high availability and easy scalability. Mongo DB works on concept of collection and performance.

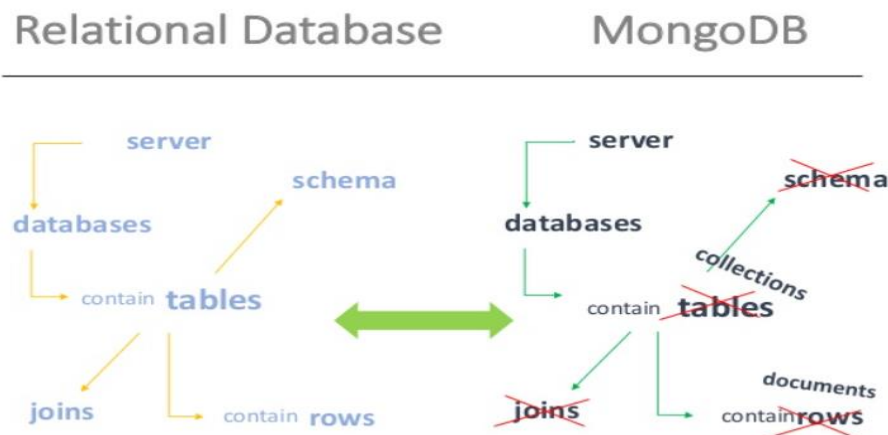
- Data Model: using BSON (binary json), developers can easily map to modern object-oriented languages without a complicated ORM layer.
- ORM: object relational mapping.
- BSON: Binary json based json.



Database: Database is a physical container for collections. Each database gets its own set of files on the file system. A single Mongo DB server typically has multiple database.

Collection: Collection is a group of Mongo DB documents. It is the equivalent of an RDBMS table. A collection exists within a single database.

Document: A document is a set of key-value pairs. Documents have dynamic schema.



2.9 NODE

Node.js is a server-side platform built on Google Chrome's JavaScript Engine (V8 Engine).

Node.js is an open source, cross-platform runtime environment for developing server-side and networking applications. Node.js applications are written in JavaScript, and can be run within the Node.js runtime on OS X, Microsoft Windows, and Linux.



Node.js is a platform built on Chrome's JavaScript runtime for easily building fast and scalable network applications. Node.js uses an event-driven, non-blocking I/O model that makes it lightweight and efficient, perfect for data-intensive real-time applications that run across distributed devices.

Node.js = runtime environment + JavaScript library

Features: Following are some of the important features that make Node.js the first choice of software architects:

- Asynchronous and Event Driven
- Very Fast
- Single Threaded but Highly Scalable
- No Buffering

CHAPTER-3

LITERATURE SURVEY

3.1 EXISTING SYSTEM:

- In the offline system, it is an overhead to keep the records related to faculty, students.
- Everything related to their progress in the system is marked manually. E.g. A report of a student's attendance is generated monthly is shown to his / her parents.
- Now, a regular student, going to the school every day, is marked absent for a day by mistake. It is a burden to take out the register and view the records.
- As you can see, it is a very time-consuming process and it costs much.
- So, I thought why I should not help these young guns of the nations to help them to have the bright future and to make an online centralized platform which can be accessed from anywhere in the world.
- My other aim is to minimize the paperwork as minimum as I can so that there is no need to cut more and more trees.

3.2 PROPOSED SYSTEM:

- The need of this system is to maintain a proper user friendly communication.
- The scheme, which is created, now generates all the details that are recalled manually.
- Once the details are saved into the system there is no need for numerous persons to deal with distinct sections.
- Only a particular person is enough to preserve all the reports. They can also be given as per the implementing needs of the user and those needs are: big volumes of data can be stored with ease.
- Records stored are modified with much ease without taking numerous efforts. Stored data and procedures can be easily modified.

- Smooth calculations are done, and the Main important benefit from this system is it provides a good way of managing the thing in an better implemented way and large amount of work can be done in less interval of time

CHAPTER-4

CONCLUSION

The system is developed in such a way that the user with common knowledge of computers can handle it easily. The system developed has proved to be user friendly and efficient in achieving basic goals. The system takes care of all the constraints which have specified. The system is found to be really beneficial for the concern aspects. The site developed is realistic and secure. Hence we conclude that the present system would definitely help the user by saving time and effort by reducing the processing time and volume of errors. The efficiency of the work done would be improved and work satisfaction on the part of the teachers and students after computerization would definitely on high. The satisfaction would be definitely higher when compared to the old manual system. Increases the quality in work for educational institutes. Also helps the educational institutes to do regular activities accurately, fastly and reliably.

CHAPTER-5

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