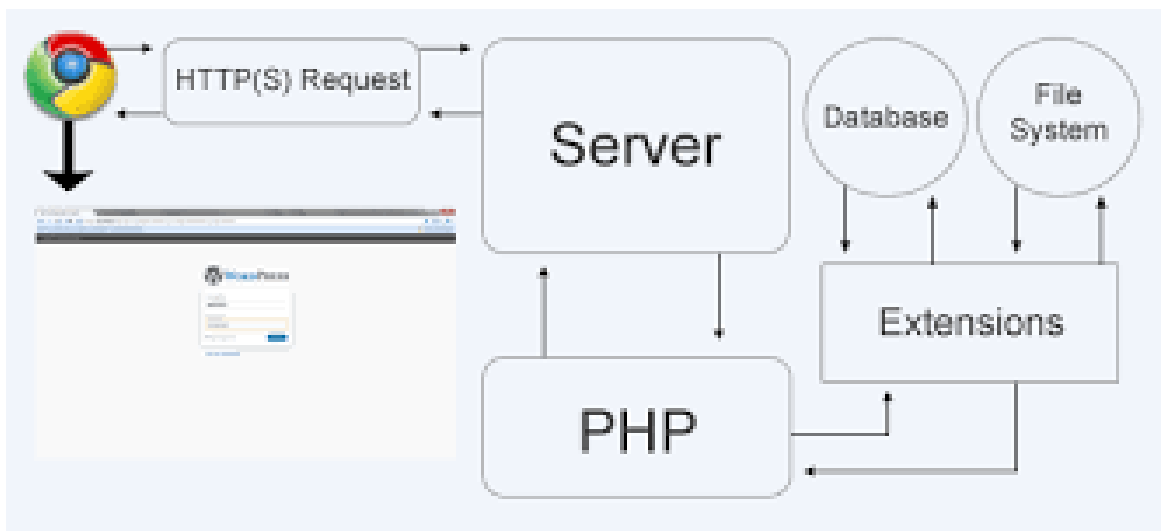**"PHP Programing System"**

(My Essay On My Specialising Programing Language PHP)

- Saurabh Choudhary

Server-Side Scripting Language For Developing Dynamic Interactive Websites On Client-Server Model

Introduction

My brush with PHP happened during the second semester of my DOEACC course - 'A' level which I had pursued from 1998 to 2001. I had passed class XII from CBSE board in 1998 with 69.8% marks & PCM stream. My record in class X was 86% & ours wasn't a CBSE recognised school. So we had to give exam privately. But we were helped by the school to enrol in the private exam & appear at the examination centre. My optional subject at the XI-XII level was Physical Education, hence I had three practicals. The practicals had happened one month before the exam & I had appeared in four entrance tests after the boards to compete for different undergraduate programs. The first one was my DOEACC program for which I had applied for the 'A' level course in JLJ Academy Of Computer Science & the exam was on 20 April. I had just returned from the Ranji season 1997-98 after completing the knockouts after the board exams & I had thirteen days left before the admission test & I started preparing for the second admission test - That of UP REC B.Sc. (I.T.) program on 20 May. I learnt driving in between, opened my bank account, collected my cheque for the first Ranji season from Ghaziabad Cricket Association & worked hard for another one month. The third admission for which I had filled the form was B.Sc. (Comp. Sc.) from IGNOU on 30 April. & The fourth one was the form of the Delhi University. Results of all these exams came after the results of the board exams. I had competed in all four with handsome points & secured high ranks, opening for me the channels for multiple elite academia.

I took admission in my pre-decided DOEACC course, & enroled there for sports case under which I was exempted for the attendance. The normal attendance requirement was 75%, while I was given deadmark of 20% failing which I mightn't have been allowed to sit in the exam & would have had to repeat the semester.

In the DOEACC program, we had eighteen subjects & one project spanned over three years. Each of the subjects was of 100 marks & the project was of 200 marks making the syllabus of 2000 marks & there were practical & viva in many subjects.

It was in the second semester of these, that I had studied PHP, one of the two programing languages in that subject of "Web Design" along with ASP. PHP hit me so high, it was so interesting & easy & allowed convenient development of projects, dynamic & powerful websites, that I became an ardent fan of it. & I felt I had come at the right place for my academia. We had studied C also in the same semester & that too in deep troughs with data structure & ODBC in detail. So three programing languages in a single semester & I was a master of the universe with database projects being my weaponary. In C & ASP with had connected databases of SQL & in PHP of MySQL. Later we studied three more languages V.B. in fourth semester & C++ & Java in sixth semester. RDBMS was very interesting & we had DBC in all languages. V.B. was with Oracle & there was a bit of scripting in Linux also - Under the topic shell scripting.

When we had studied PHP to normal widths, we had started visualising large projects with complex operations & diverse models of client-server & window application & console, & I picked it up instantly as my language for my examination project & further specialisation. I made two projects in the second semester - Those of Point-of-sale processing software & Railway reservation system & four more in the fourth semester - Those of E-commerce application, Online voting, Chatting application & Social networking application. After the fourth semester, I had started working on the examination project & had built it in two months - The University management system.

In the sixth semester & then after the exam that year & over the next year & a half, I practised making some self-thought projects which I pluged in in this site later.

With all these projects & this site finally, I actualised my intellectual aspirations of computer programing & traversed what is for me the best programing language of the world.

So, this is an essay of mine just on this beauty of this technology that it is, & the beauty of the design & experience that it generates.

So, launching what is my epic on the PHP programing language & dedicating it to my fellow PHP programers.

HYPERTEXT PREPROCESSOR PAGES

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Chapter 1: Model of PHP

PHP is a fourth-generation programing language compiled by interpreter & is a server-side scripting language. It works on client-server model where the user interacts from the client end with a program hosted on the web server, giving instructions for operation & usage & getting tasks performed in return by the server & the meaning of server-side scripting language is this only that the program is mainly a code written for the server defining how the server reacts to different instructions of the client & its in-line code is embedded in HTML & the file is hosted & called from somewhere on the server & it runs on a PHP server installed on the domain & works in combination with database.

The interpreter checks the entire program for syntax, lists the errors & translates into assembly language on success being found.

The structure of PHP workmodel is expressed well by the following flowdiagram -
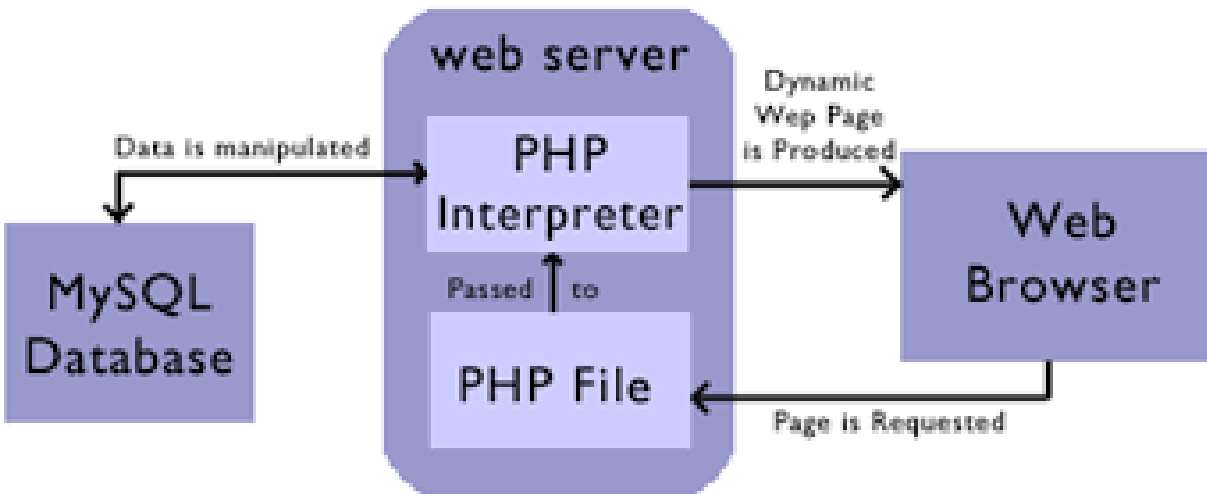
This diagram describes how the calling & executing of PHP programs is done. The user first calls a PHP page through a web browser, which is hosted on a web server. The PHP file is parsed to a PHP interpreter on the web server by which the dynamic webpage is executed. Data from MySQL database is also manipulated on the side & involved in the page program.

The structures & programing constructs of PHP are quite similar like the C language or other advanced languages. There are thousands of inbuilt functions which can perform regular tasks & special features like session & array which can perform specialised tasks.

The session is provision which enables access of value of a variable across pages & arrays can be used & implemented in multiple ways with foreach loop or shuffle function on need being.

The forms of HTML in PHP are processed on click of submit button & the submit code is checked by isset function. If that button has been set, the code written inside it is executed. There are functions to perform the database operations like mysql_connect, mysql_select_db, mysql_query, mysql_num_rows & mysql_fetch_row & mysql_error for error. The database connection command is written through the parameters of the mysql_connect function & this code is saved in a file which is called on all pages so that if change has to be made to it, it can be done from one place. In my projects I save this code in a config file which also contains the other common codes that may be required to be called on multiple pages. These few common codes are declaration of a random string function, function to detect the I.P. address of the client, a few regular expressions, calculation of datetime for IST from GMT & a block of code fetching the contents of any page from the database.

The websites I design, I keep them in the format of the frontend layout consisting of a header, a footer, a leftpanel & rightpanel common to all pages & the central content being specific to the page in consideration.

The common files I store in relevant folders - Like a folder for the common images of the site, a css file & other common files in separate directory if there are documents like PDF, Txt & there is an index file in each of my media folders disabling directory browing for that directory which someone might do out of mischief. This file redirects the location to the previous page from where it has come & I also apply checks on querystrings & if conditions ensuring there is fullproof security for the robustness of the code & it doesn't allow a user to misuse any code even partially. Like when I check the hitting of a querystring, I ensure that if the value should be a natural number or a whole number, it should be like that only, & if the number of variables in a querystring can be fixed, it should be done like that.

There are some common tables in database in all my projects Like a table of fileformats listing the formats of image, video, audio & document. I use it to validate the file type on uploading any. I use a country master, state master, district master, ISD master, zip master & nationalities master to validate addresses & locations in any place & I keep a record of the barred I.P. addresses & new signins in two tables of every database to take care of the security aspects.

My projects have five layer security - If there are three unsuccessful login attempts in an account in a day, the account is locked sending the unlocking code to unlock it only to the registered user of it. If there are ten failed attempts in a single account from a single I.P. address in a single day, that I.P. address is barred from logging in into that account forever. Whenever there is a login into an account from a new IP address, the user is intimated about it sending him the option to block it. The unlocking code for unlocking the account that is sent to the user in case of locking, expires on one attempt. & There is an option of Logout from all devices also in each user's dashboard, by which he can logout all the users logged in into that account at that time. Also I keep a provision of barring all I.P. addresses trying to breach in the admin of my projects from logging on to the site only forever. All these systems I have devised myself, after learning the basis PHP systems. I love working most on social networking projects & I have developed my models of all the major social networks with beautiful design & interface. The users who sign up to my systems, I take wide data from them covering personal address, occupational & educational bureau. I don't delete any data or file from the system or database, just mark whatever has to be deleted as deleted, so that there remains security. I set up good favicons in all sites with iconic logos. The logos of my apps I design in MS-Paint.

11 of the 17 projects I have pluged in in this site, I had made them in the college period & six developed later when searching for projects to be pluged in. The eleven projects taken from earlier backup also had to be streamlined quite a bit to fit into the website. In my website I have 386 tables in the database, 67 of which are of the main module. I had kept the tables of all projects in one database as I didn't know how to use multiple databases together. In these tables I had prefixed the abbreviation of the projectname in the tablename so as to make it easy to recognise the tables.

My social network projects have come up with best designs & system & they contain almost all the features that are there in the network they are modeled on.

This is a bit of prelude to my PHP essay, I will be elaborating on specific elements in the consequent chapters. My editor for writing PHP code is Dreamweaver & it is very resourceful prompting all the keywords & HTML elements. I has provision to write

code of ASP, JSP, Javascript, VBscript all etc. is very rich in stock.

Chapter 2: Type of scripting language

PHP code is written between the tags **<?php** & **?>**. The variable names are prefixed with **$** & the variables aren't needed to be declared before using. A variable type is detected according to its value. The word **echo** is used for print. There is a natural connection with **MySQL** & the files are uploaded very easily on a fixed location. These are some of the basic properties of PHP. The . operator is used to concatenate two strings. The strings to be printed have to be quoted in double inverted commas or single inverted commas. Dreamweaver prompts HTML elements after every space, tags in case of every element, attributes after every tag & PHP keywords on keywdown of first character.

Forms have 2 methods in PHP – GET & POST. GET puts all the variables & their values in the URL bar & POST safely submits the button & the form gets processed. The POST method is safer as it doesn't allow the variables to be manipulated in the URL bar. There are ten input types in HTML – Text, Radio, Checkbox, Button, Submit, Reset, File, Hidden, Dropdown, Password, Image & Textarea. The forms in which file browsing has to be allowed, **enctype="multipart/form-data"** has to be written in the form tag. The files in which session is to be used, **session_start();** has to be written at the top of the file in the first line. **ob_start();** is used to use header("location:") function & addslashes & stripslashes are used to add escape strings in a string. Trim is also used to trim leading & trailing spaces in any string. When processing a form the page can be redirected back using *<meta http-equiv="refresh" content="0; url=page_name.php">* after the message to prevent the code from being rexecuted on page refresh. In my systems, I store the titles of the pages also in database & put a back button in each page

to get back to the previous level. I like to give buttons in place of links at many places as they are more beautiful.

Courier New is my favourite font & I set it in the body of every page & use throughout. Verdana I use on the captions of submit buttons as they fit to that. Blue colours I use in links mostly & I keep my headings in sentence case rather than title case. The colour schemes I keep soft & beautiful & use personalised terminologies like Backend for Admin & Dashboard for My account. I keep relevant variable names in my code to make the experience meaningful & often write in white fonts on dark background.

In this site, I have coded a common file for comments. The comments which have to come in every page. The page is detected by its filename & then the comments of that page will come under its bottom. The pages with multiple posts even in them I have used a single file to operate comments below every post. This I didn't know earlier that the common file of comments can be used in every page or post. I didn't know that the page id won't conflict with the id of the file which contains the comment code. But it yielded. From this, I learnt that much more centralisation of codes can be done this way - The file being run in between doesn't conflict with the file in which it is being run. Now I will tell some things about this site of mine which I haven't told before. There are six major parts of this site of mine which I have developed some myself & some by Wipro. The six parts constitute the six different functionalities of my site. These are - The main module (I.e. The CMS & user-admin interface), Appointments diary, Webmail, Cloud, Managerpanel & Projects. The CMS is the contents in the frontend which the users can see. The webmail is a configuration of the mail system of my personalised mails of this domain in admin. Cloud is system of backup & sync which keeps taking up backup & sync of all devices I connect. There is an appointments diary I maintain over here which is accessible to both me & my manager & we both can edit that. My manager also has his webmail & cloud. These two sections of webmail & cloud are the two sections I got fully coded by Wipro. In the appointments diary we note the appointments given to any meeter for physical or virtual meeting.

In my site, there are 51 pages in the frontend & middleware combined. The links of eight of these are in the header, seven in the footer & eighteen in the leftmenu. The pages of frontend are of two types - Those of one passsage form & those of multiple posts format.

The pages of one passage form are those who content is determined by a single text area & those which have multiple posts, their posts can be added one after another. I've put in an FCK editor to manage all this. The posts all contain media & the posts are resequencible. The filenames of the media I keep by timestamp as they won't be replaced by editing of posts with overwriting new files as the timestamp will always be new. I have kept some stylish rules for my site which I will be inking here.

1) SMS OTP comes in link form
2) All posts contain image
3) All photos include caption
4) Manager activity log is maintained but is visible only to me
5) Manager cloud to be viewable to me but not writeable
6) Mobile version of the site got developed address http://m.saurabhchoudhary.com
7) Any IP that tries to breach into the admin or manager of the site, is barred from logging on to the site only forever
8) There is an option of logout from all devices from all dashboards
9) There is a beautiful favicon on the homepage
10) Desktop notifications are onturnable
11) Emojis, GIFs & stickers are provisioned to me for birthday messages
12) Media validation is done along browsing the file
13) Backup & sync of my data is done
14) Infoarchives of Country master, State master, District master, ISD codes, Zip codes & Nationalities are plugged in
15) All inputs made by the user are scanned for threats / inconsistencies / optimisations
16) Media opening is done maximally in the browser
17) All the text inputs allowed in the app are only English
18) Maintenance is due if ever it accrues due to advancement in technology
19) Digital signature of mine is there on the homepage

The quiz are asked of the direct answers format & directions are given in each quiz to explain how the answers are to be expressed. The users have an option of report abuse to report about any foul or abusive activity that might be being done anywhere in contents. Keyboard & mouse inputs are validated before acceptance e.g. only numeric keys should function in the text fields which call for numeric input & emojis & out-of-regular-charset shouldn't be

insertable or pastable where they are invalid. The SMS OTP goes in link form, which means the user might be needing a browser in his phone for striking that link. He needs a mobile phone in the first place, is also there. The browsers in mobiles show the mobile version of the website. This site had cost me around Rs. 7 lakh in the primary stage. This year I have made two amendments in three sections - Modified the commentability type of E-Books & Projects & added individual commenting also in them. & Added a new page of Music Station where I posts songs which I like - Which can be streamed as well as downloaded & for which I have paid price of Rs. 5 lakhs of rights. 39 books also I have taken rights of.

I have decided to add more projects as life is going ahead. I will be adding more projects as I make. Some of them are ready in webroot & will be ready to be added soon. The music station collection I have decided to take to 143. Everytime I do some advanced work in the website, I get it done by the same Wipro team as I fear I might make some mistake. The notifications in my site, I don't want to provide the option of mark all as seen as I want the user to see every notification.

I keep every kind of facility in my programs like giving the option to search in notifications, activity log, saved items & my comments also, clearing the search on visiting any other page & connecting the save / unsave & comment facilities in search, saved items & comments also.

The admin I have given connection to see the profile of any user on clicking on this username anywhere in the comments & I keep track of the pages also from where I have come here so that on clicking the back button I go back to the same page.

Some of these projects I have coded for my relatives, like the Kisan Mandi for an uncle of mine who wanted to develop an online sale forum for farmers to help them. This was done under an organisation AIKSCC which is a group of all the farmer organisations of India & has 130 members.

The Meta is my favourite technology organisation & Zuckerberg my fav technocrat as he has done many works in my favourite field of social media. He has done at least ten works in this field like FB, WhatsApp, Instagram, Messenger, Facebook groups, WhatsApp channels, General chat, Meta AI, FB music & Threads. The

Helo app I had come to know from Hiba Nawab actress of 'Jijaji chhat par hain' serial from her Instagram profile when she had told that she is on Helo also & people can follow her on that also. It was a very interesting app & I built my model of that.

Chapter 3: Unique features

PHP has many unique features like easy connection with MySQL, multiple methods of form processing, $_SESSION array & many inbuilt functions which make the job easy. The MySQL DBS is a part of the PHP server & comes with that along at the backend. The form methods have a $_REQUEST method also which covers both the $_GET & $_POST methods & there are some more global arrays like $_COOKIES, $_SERVER etc. The $_SERVER['PHP_SELF'] variable is used in PHP to access the path of the file being called. & The basename function is used to tell the filename of the nodal file. In my systems, I keep this provision that if some form or setting has produced a result on some page, it gets cleared on going to any other page in between & coming back.

The login in my systems is by email as it is easy to operate with that. The mobile nos. also I keep unique. The dates all I keep along with the times to have the exact stamp. & The ids of all tables I keep in integer form including the media filenames (Autoincrement) by which it is easy to manipulate with that. All the fields of a database table I keep keepable null so that I can insert a null field in a query. The password of my admin on localhost I keep blank so that I don't have to enter it again & again & I know I won't keep it blank on the server. The important passwords like those of the manager I keep settable to at least 14 characters for extra security. The bookmarks of all important web pages I keep to access easily & I keep four browsers including Mozilla, Opera & Internet Explorer for parallel testing in a user account by session through different accounts. The passwords of all user accounts in my website I have kept same in localhost so that I am able to remember them easily & I keep a file ready of passwords also to provide me whenever I need.

These are some features of the PHP which are unique & which provide distinct facilities for population.

Chapter 4: Basic systems

PHP has some basic systems like the mathematical calculations, screen printing, form processing & database operations. Whatever is written in HTML can be printed on the screen with echo function. The mathematical calculations can be performed directly using the operators & operands. The form validations can be done in Javascript without submitting the form & regular expressions of various kinds can be used in that to validate the inputs. File size limits in the user end I keep 20 MB so as to avoid heavy uploading & at the admin end I keep it unlimited size. Email ids I keep clickable with **a href = "mailto:"** tag so as to open the email compose boxes when clicked.

The screen messages in PHP can be easily displayed through VBscript & Confirm boxes can also be printed in that. The users I allow to upload only image, video, audio, documents & zip files in the upload segments, not program files so that they aren't able to put up any executable files.

I have got developed another setting in my site by Wipro that any text input made by the user anywhere is tested for threats / inconsistencies & optimisations so that the user isn't able to input any buggy matter in that.

The principles of normalisation I follow all in the database keeping different tables for every entity & avoiding data redundancy wherever possible. But some places I repeat data to make it easy for coding.

The higher principles of programing are followed in big companies like all the principles of normalisation & using such

provisions by which less RAM is expended by the CPU & less work has to be done by the computer, like unsetting the variable which aren't anymore of use or using the same variable where it can be. I use these principles where they can be but at places it has to be practical & the easy of coding has to be seen.

Chapter 5: Main departments of PHP

The main departments of PHP are structures & constructs, syntax, logic & design. The structures include loops & if-else / if-else-if-else statements. The loops are mainly for, while, do-while & foreach. There is a switch-case-default also. The foreach loop runs through an array. & The if statement has such conditions like if the prior conditions in an or statement are met, the further ones aren't checked & in an and statement, if a condition is found false priorily, the further conditions aren't checked. The flags can be used to check a condition at places. The if or else statement can be written without bracket if the block of code in that has just one line. Multiple lines of code can be written in a line if they are separated by a semicolon. The comments can be applied // in a one line & /* */ on multiple lines & <!-- --> for HTML. \r can be used as a carriage return in a print.

The mail function also I have a code taken from somewhere by which mail goes, by which I send mail from program. The arrays in PHP can have string keys also & it has to be declared first before using.

The random string function I use for generated captchas etc. is a different function, but there is a shuffle function in PHP to shuffle the elements of an array. Random string can be generated using that also.

I use it to generate passwords. The passwords in my database I keep encrypted using the base64_encode & base64_decode functions to encrypt & decrypt. The passwords for sample ids I keep on the pattern of Firstname@123 & ids firstname@gmail.com to keep it simple & manage easily. I keep different passwords for all my accounts on different

platforms so as to keep secure & follow strict password policies for additional security. & I keep all my passwords alphanumeric. The passwords for my own programs also I mandate alphanumeric to ensure full security.

The most important department of PHP is database operations which are implemented by database connectivity with MySQL at backend & are executed by code in the file at frontend. The new versions of PHP & MySQL have come & now mysqli is used in place of mysql. In that, the parameter of database is there in the mysql_connect function only, there isn't a separate function for mysql_select_db.

This is object oriented programing & the database connection is used as an object of mysql in that & the object of mysql has to be passed as a parameter in the (First parameter) & then the query in the second parameter. The database error function is put as an or function in that.

The logic is a basic object in all programing languages as also in this, & the logic is fully based on arithmetic, analytical & interpretational procedures. The logic has to be applied everywhere on own & it isn't taught in any CS school. It is expected to be efficient in from mathematics of class XII. I am able to do everything which is done by logic. I am thinking of taking admission in MCA this year when the entrance exams happen & study it somewhere so that I am able to enhance my PHP programing skills & make better projects as freelancer which I am thinking of doing after this. I want to work for a few years as a programer before giving up my career & will break from public contact to focus on this & will stay away from social media mostly for this & will give update of my projects when I come back to work. The MCA exam I will be giving for RECs & prefering UP as the college state & Ghaziabad as my study center if I get it. The universities offering MCA in UP are many & will be pursuing from some near my residence city. I would like to enhance my knowledge of some other languages also like C, VB, C++, Java, Linux Operating System, RDBMS & Multimedia, but profess only in PHP. These subjects I had studied at length in DOEACC & will like to specialise in all them in the PG. My love of PHP programing language is so immense, I can't express enough, & I would want to become a PHP programer only in any other birth if I get it again & work as an applications developer in some big I.T. company. It actualises my intellectual pleasures & satisfactions. It is a leisure I value more

than even my main work cricket. I have written about it in my 3rd e-book that I value my love for computing & art more than cricket.

Chapter 6: Natural connection with MySQL

This is the biggest feature of PHP - It's natural & easy connection with MySQL & the database operations programing it enables from the frontend. All programing languages have some better compatibility with some selected DBMSs - Like 'C' & ASP have with SQL, V.B. & Java with Oracle & PHP with MySQL. They have some properties with connect better with these DBSs. PHP is the only programing language which has an inbuilt connection with a DBS & comes with it in the instal. The MySQL server in the localhost has a root user whose password has to be set while installing the software & other users can be set afterwards. The root password which is set while installing, it has to be used to login after that only. The setup file of AppServ is very small & it takes only 2-3 minutes to install. It installs in C: by default but asks to reset the installation location. The MySQL DBS can be reached by entering localhost/phpMyAdmin in the URL bar. MySQL is the most convenient DBS to use & it is available on all the webservers now as it provides very easy way to create tables by selecting fieldnames from the dropdown, specifying columnwidths & setting up the table with these specifications. The MySQL databases created on localhost / webservers can be exported / imported by creating the dump files & populating it. There is a query box using which SQL commands can be given & queries effected. The MySQL primary key has an auto_increment feature which generates a next positive integer primary id in the table automatically on not entering it. The ids are incremented above the highest id ever entered & any ids deleted in between are skipped. The increment id can however be set to 1 again on truncating the table. The tables & databases have some more facilities like copy, rename etc. in addition to their basic functions. The tables in MySQL have a field limit of 1024 & 2^{14} tables can be created in a database. The text fields in MySQL are

flexible & they don't have compulsion of a text value beginning with an alphabet like it was in Oracle earlier. The text field is case insensitive & can contain upto 65656 characters against the varchar type which allows only 256 characters. There are five basic datatypes in it - Namely Integer, decimal, text, date & datetime. The mysql_num_rows() function in PHP code returns the number of records present in a query resultset & the mysql_fetch_row() run in a while loop fetches the records in a resultset one by one. There are five basic numeric functions - Those of sum, count, max., min. & ave. which can return the values related with a column applied to accurately. There are some string functions also like lower, upper, trim & concat which manipulate the string values accordingly. The binary clause put before the string datatype makes it case sensitive. The main features in all DBMSs are similar except for a few differences that might be there in specific ones, like there is dense rank in MySQL which returns the consequent rank of a value in case of some joint rank being there in between.

The mysqli_fetch_array() & mysqli_fetch_assoc() are also some varieties of the looped record fetch, which return the results by different keys like fieldname & other keys.

The database connection command has to be included in every file which requires database connectivity by using the include() function & then the command variable like $mysqli can be called to use the connection. The include() function is used to call any file in between. I use it to call like header, footer, leftpanel & rightpanel etc. I also use a file named common in some projects which use some common codes to be run in many files. I also use a file resend included in every page to call the resend button to resend the code to unlock a locked account.

The common codes I run in every config file are like those which are to be run based on some timebound functions, like the result of quiz, updating status of appointments etc. & new phases in university management. The datetime stamp that comes by default is the UTC stamp. I convert it into no. of seconds by using the strtotime() function & then add five hours & thirty minutes to get the IST & then convert back from the strtotime() to obtain the formatted time. My favourite time format is **"d-M-Y h:i a"** which prints the monthname in abbreviation, year in full number, hour in 12 hours format & with ampm.

In my CSS sheet, I use two classes one for table & one for td to wrap the text if it's being wider than the column breadth. The datetime stamp in Javascript is of local timezone, & it returns value of every part of it on supplying the parameter. Javascript I use for form validations & VBscript for the window displays & CSS for the table & td classes of wraptexts.

In my dropdowns, I set the maximum & minimum widths to manage the dropdown widths & the widths of tables I keep in balanced level to keep it neither very broad nor very narrow & rows of a table I often keep in alternate colours to make it look attractive. The projects I am working on at a time, I keep it bookmarked to make it accessible easily. The PHP programing system was invented by Rasmus Lerdorf in 1994-95. & The PHP learning group **'PHP programers'** was created in 1997 to help people take help from admins. & The PHP site has a documentation of the PHP working & system on the page php.net also which guides the users for using the PHP language. The PHP server AppServ is an opensource available to download freely & is attainable free of cost.

The media elements textarea, textbox, submit buttons, selects, image all I keep determined min & max width & I apply aspect ratio in images.

The form validations I apply on click of the submit buttons in place of the submit of the forms if there are multiple submit buttons.

There are some other PHP servers also like Xampp Server & Wamp Server. In the Xampp Server, there are forty rows insertable in a go in the DB interface as against two in the AppServ.

The PHP technology was used for scripting 78% of the webpages in the world as of 2023, it has got superceded by Python now. The biggest advantage of PHP is that it is very easy, the only thing is that its syntax is somewhat high.

There is a website w3schools.com which provides referances for functions of web develpment technologies & I had a book PHP 5 by Wrox Publications which provided the basic manual for the beginers level & I learnt my first guide from that only. The ease with which PHP does data handling, it isn't so in any other language, & it requires the minimum size of code. The move_uploaded_file which

uploads an attached file to a set location, it can set the filename to any desired & it overwrites a file at that location if the name is same. The other important file / folder functions are file_get_contents, file_put_contents, scandir, file_exists, is_file, rename, unlink, mkdir, rmdir & copy. I keep the profile images of people when then sign up in a rough folder till they verify the mail / mob. & copy it from there in the mail folder using this copy function only. I have also found the code to generate the dump of a database to keep it like duplicating daily for a backup. It is done by a function named db_information_schema.

The resultset in a select query of the mysql_query command comes in array form with two-dimensional array presenting one recordset in each line. The values from mysql_fetch_row for loop can be accessed using the field index of the query.

The new data coming to see I mark with highlighted background, don't update it as seen automatically on accessing that page, give a button at the bottom to update it & provide a tab index to move through the new records so that there is easy navigation. The mark all as seen button I keep separately so that the records don't get marked as seen without seeing them. The anchor tags also I use much to take the screen to desired locations on pressing of certain buttons or links. In my website, I keep copies of both the files folder & database daily to have backup. The cloud function I have got developed, it takes backup of all my digital devices including desktops, laptops, mobiles, cameras & Mp3players. I store my phone contacts also on my webserver & have a function of original files where I can upload files from my side in addition to the backup taken automatically. My Roland digital synthesiser is also connected to it & saves its recordings on it. Digital models are being developed of all electronic devices now & they all are being brought to computability. Even T.V. & AC. The future has plan of smart homes also. & All this should make India a country of smart cities. Mark Zuckerberg is my favourite technologist as he is of my age, he is one year younger than me, he is of my favourite field - Social media, he has coded the entire FB in PHP & had launched it before the age of 20. He does the coding work himself & has built the entire FB himself. The innovations he has brought in the form of FB groups, WhatsApp Channels, General Chat group messenger & Threads are all advanced features of social networking & the fact that he acquired WhatsApp & Instagram show only his keen interest in social networking. Social networking is the cream of the fun world today &

it is so beautifully a combination of science, arts & commerce that it brings the entire world to a person's feet.

Chapter 7: Logic & syntax

Logic is what runs the programing system through its syntax & both symantic together execute a task given by the hindwire. The syntax is the platform developed by the language's inventor on which the code to be executed can be written, & the logic is the technology applied by the user to use that platform to achieve the task. Logic has many departments, like arithmetic, analysis, reasoning & data interpretation. The entire content of any computing storage is data – Be it files, database or a stock of text. The binary nature of computing system has been used to code data of all types in digital form – Be it image, movie, animation or stock of text. The numbers all in any other system are representable in binary form. Alphabets all have a binary code. & The images & movies are convertable in binary form with colour notification of each pixel in the image & image data of each point of time in a video.

The digital technology has revolutionised the world with its reaches till financial system, communication channels, file system, endless computational capability & has helped in as much as satellite techniques & business proliferation. The digital movement going on in India under the name 'Digital India' is targeted on a few main objectives – Spreading the span of e governance in the country till rural areas, making financial transactions transparent, improvising app-based services & enhancing the skills & knowledge of people of the working generation. All this is aimed to make a better, educated & equipped workforce & develop the society & nation to the hilt. PHP's syntax is much like a natural language (English) – It speaks of programing terms & concepts in the spoken language & operates them by its structure & construct objects & gives easily understandable code to the code writer.

The programing software is related to mainly 3 areas at the bottom level - Mathematical calculations, file operations & database works. The mathematical operations are of much use in scientific programs which are used for scienic purposes. Much complex calculations can be done by implementing scientific programs written in scienic programing languages & business programing languages are used to develop business applications usable in commercial purposes. The programing languages are of these two types - Those specialised for scientific purposes & those specialised for business purposes. Some languages have powers of both, like C. Fortran is an example of scientific language & Cobol of business language. Basic & C are third generation languages while C++, Java & VB are fourth generation languages. The softwares are also of two classes - System software & application software. System softwares are those softwares that are used by the system to do its work like operating system & kernel & application softwares are the softwares used by the user at his end to carry out his final tasks. System softwares are written in languages like C. Embedded systems like the softwares of AC are also written in languages like C. In C, data structures are taught to implement the operations of data - Like arrays, stacks, queues, lists, linked lists, trees & structures are implemented through struct & typedef.

Chapter 8: Beauty of design & content

Designing of PHP applications is done in HTML. HTML is the scripting language for web pages & it produces static data through its code language. PHP applications can be of three types - Websites, intranet applications & local device offline applications. The websites are applications which are available globally through world wide web, intranet application are those which are accessible on a LAN & single device offline applications are ones which are openable only on a local computer offline in web browser. PHP applications are run in web browser & they are run by entering localhost/foldername in the URL bar. The files or folders which have to be run in PHP, they have to be saved in the folder www of the folder AppServ of PHP which is created on installing the server. Hence the location of the place where it has been installed must be remembered & the files saved there in the www folder. On entering the localhost the DBS interface comes. The designing of PHP sites in HTML can be done very beautifully with attractive elements & media like forms, text displays, input fields, formatting, images, audio / visual media, files, links tables & highlight colours. The contents of a web page can be sets of text, bulleted lists, numbered lists, headings, newlines, breaks & non breaking spaces. Beautiful designs can be created in HTML & they can be used to develop static websites. PHP can be used to develop dynamic websites in which result of program is decided by user interaction. Blank spaces in HTML are limited to one character & trailing spaces after one instance are neglected in printing on the screen. For producing multiple whitespaces at one go, ** ** has to be used which is a code for non-breaking whitespace & produces one whitespace for one unit of code. The audio & video clips in webpage are played by audio / video player & image & links are populated respectively by img & a href tags with definition of size,

target & formattings. Every element of the page including body, headings, forms & texts has option of formatting through style & they can even be styled using a CSS class which is defined in the stylesheet & applied anywhere. The designs can be made very good-looking combining very good fonts, colours, styles, alignment settings, backgrounds, borders & interface elements. The HTML sections can be structured in four forms - Tables, divs, layers & frames. Every one of these has its own characteristics. Table is the simplest & the easiest to use. While div has the most refined display. For implementing divs, the HTML tables have to be sliced in div. I do my structuring in tables & print them with or without borders, thickness of borders variable, cellspacing & cellpadding also settable, bgcolour set & width defined. The width can be defined in % or even units. The row heights can be numericated & the column widths fixed in % or units. A form has an action attribute which determines the target page of form on which its execution will be effected. The form validation function can be specified in this tag which can be defined in head. If the function is defined in head it gets loaded immediately when the page is loaded & if it is defined in body it is loaded when it is called. Any function can be defined & called in Javascript or PHP in a PHP script, but if a page has a definition of a function, it can be included only once in the primary page. If included more than once, it will be declared more than once which will make wrong, it can be declared only once. I have created special post pages also in my website in these years to give special tributes to my admired artisans like R.D. Burman, Rajesh Roshan, Bappi Lehri, Test cricket, Family album & Customised calendar. I have launched these pages on the days of these people to give salute to them & they are available on my site permanently since. Since last year, I have been making projects on freelance basis also WFH in PHP, I have built some projects like a matrimony site, a dating site, a Sale-Entry System for a coffee shop, a Social Group & a Group Messenger. I have also developed 2 sites for family members - One Kisan Mandi (For online sale for farmers) & an Electronic Mart (A forum to find information about electronic items, see their reviews & compair them). The logo designing I don't know Photoshop well hence I do it in Paint & I use SQL tool SQL builder to import data from or to Excel. The Paraben software I use to construct the diagrams for my SDLC documentation like DFD, E-R Diagram, Flowchart & Use-Case Diagram. These are diagrams constructed in SDLC documentation for different purposes. The DFD displays the flow of data in a system, the E-R Diagram depicts the entities in database & their relations, the Flowchart shows the entire flow of system & the Use-Case diagram

depicts all the actors involved in the system. The database systems are of some more types in theory than practical (Which is relational), like hierarchical, nodal etc. & The SDLC processes include ten main stages covering - Requiremnts specification, Preliminary investigation, Feasibility Study, Cost / Benefit analysis, SRS documentation, Designing, Coding, Testing, Implementation & Maintainance.

This way, the design & content in PHP can be used to create very charming displays & experience. The content if there is impressive content in use it can enance the usage of the application to much high level.

Chapter 9: Dynamic & interactive websites

The main power of PHP is that it is used to create dynamic interactive websites which allows engaging interaction between user & system. The interaction can be of input & output where the inputs are given by forms & links & media objects & the results may be database results, mathematical calculations, file & directory products, image displays, media streaming & sound productions. A project in which I had filed lengthy documentations was my college project for exam in which I had to first submit the synopsys & then the report. The synopsys included the blueprint documentation of the project, its description, area, objective & summary, & the report had in addition to this the code print, the input-output screens, SDLC diagrams & specifications of the usage & modeling nature of the project. The synopsys was of 62 pages & the report of 420 pages. The report had to be bound in the form of a book & the CD of the program enclosed in it in the envelop with two copies of the entire set created - One submitted in the report & the other taken along in the viva. The report was of 150 marks & the viva of 50. I got 144, 48 marks in them respectively. The project I had made was **University Management System.** This is the largest project & most complicated I have made till now & covered many more new modules innovated by me than the traditional four of this system - Admission, fees, attendance & result. I added facility of online payment of fees self in it in the subsequent semesters after admission & appended some more functionalities like Digital library, Timetable creation, Datesheet computation, Seating plan compilation & Financial accounts publishing on the website of the university. These modules were novel & they fetched me points in the evaluation. I was given remark in the synopsys that my blueprint is very good, I will be expected to justify the plan in the report & program & may be provided very high

marks if I match this. We had to attach a guide for the project & develop it under him & submit the project under his guidance. We all at the study center signed our instructors as the guide & constructed our project under them. The guide was required to have a minimum qualification of B.Tech. (Comp. Sc.) or MCA & experience of one year in industry or academy. The bio-data of the guide had to be attached in the file & he paid a compulsory mentorship fees of Rs. 100. My guide was Ms. Lalita Jain who taught us C++ & Java. The PHP may be less powerful than Java, V.B. or C++, but it has a large library of functions to use which make it a powerful tool in itself. The other applications I had considered for making the exam project were Medicine store management system, E-commerce & Online election. The model used for the Medicine store management was a common format of Inventory management which is used in many styles like POS software, e-commerce, electronic mart, customer complain handling system & ERP of a trading firm. The projects I had built in other languages where a report card printing application in C, School admission system in VB, Medicine store automation again in Java & Attendance recording in C++. The tools & templates available in ASP make it beautiful for ease, but I love PHP better for its intellectual involvement & beauty of work. The interactive nature of PHP language & its being of mode of web makes it special for attraction aspect & the business applications all nowadays are built on website forums, because it provides multi-purpose service of website, ERP & database.

The V.B. is the most attractive of all languages from overall perspective because it has beauty of design, display & interface. But PHP renders satisfaction of work, intellectual pleasure & beautiful process.

When we had been taught V.B. in IV semester, we all students had started visualising that we can make projects of professional level now & it will open our gateway of real world programing. I make projects with robust code & try to put maximum possible control.

I have devised the most of the logics I have used in this work myself eversince the learning of this language & starting working in it. All the logics I would have been required to apply, I invented them myself for myself. Like the password control feature of websites, in which I had to put check that noone is able to reach an inside page of a login account witout logging in by directly passing the path of the inner page, I struck it myself how I will do it by applying session & preventing breach. I have developed interesting

codes like Load more, Paging, Mark all as seen, Check & uncheck all in checkboxes & Invert selection in tickboxes in this process. These procedures I've applied well in Socia, Kisan mandi, Notifications, Music station & Fav things.

These have been some of my top works in web development & I have done them very beautifully & impressively through PHP. PHP is thus my GOAT technology. My hats off to the Preprocessor Inventer.

Chapter 10: Many & powerful inbuilt functions

The PHP library of in-built functions has procedures stacked upto 900 subroutines. There are functions sequenced under different categories, & each of them has scores of archived functions with or without the requirement of parameters. The functions are under categories such as numeric, string, file, database, directory, date / datetime, session & array etc. & some are uncategorised. These functions are very powerful & solve much difficulty & serve much ease & provide the facility or convenience of smoothening the programing work & the most important of all these are the mysql related functions. 80% of the programing works everywhere are centred around these 4-5 mysql commands & they render the service of database operations with fine ease & finesse. The other important function category is array. Arrays can be used to serve much purpose & they resolve much analytical reasoning.

The book of PHP 5 which I told I had from which I had learnt PHP first, it had a library of these function referances listed in alphabetical order at the back of this book. So it was easy to search as it was also in alphabetical order of the categories. The w3schools site I told about, that also has referance manual of functions in addition to the tutorials along with examples & self test run provisions. These functions they are so many that if anyone knows them he can create much dynamic work. There was a thin book of HTML also with the name Web Design in my Web Designing referance books which taught the basic HTML very well & cleared the fundamentals.

The earlier versions of MS-Office also had an app of Frontpage which facilitated writing of HTML code.

With all this & much more elite knowledge I don't possess, PHP happens to be an advanced tool of web development technology, & I am proud to be a student of it & a proficient programer of it & having been coded many projects of dynamic nature & working many still. I thank my follower community for reading this book & end it with a coverpage of the Beginners book.