Engineering Entrance E-Counselling Portal

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কল্যাণী গভঃ ইঞ্জিনিয়ারিং কলেজ
Kalyani Government Engineering College
(Govt. of West Bengal)

Certificate of Approval

This is to certify that the project report on "INFORMATION MANAGEMENT SYSTEM(EMPLOYEE ATTENDANCE and MINI PROJECT, ASSIGNMENT, TERM PAPER and MENTORING AND COUNSELLING MODULE)" is a record of project work under the curriculum of Maulana Abul Kalam Azad University of Technology(MAKAUT) for the MCA 3rd year, 6th semester Examination, 2019, for the subject "MAJOR PROJECT AND SEMINAR (MCA 691)" carried out by " Juthika Dhara (Roll: 10201016021) " the student of Kalyani Govt. Engineering College, under the guidance of "Dr. Partha Garai", Assistant Professor, CA, as a requirement for the partial fulfillment of the Degree of Master of Computer Application.

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Acknowledgement

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Introduction of Project

The main aim of science technology is to understand natural event. We feel this event with our mind, which is main part of our body. Computer is also gift of science,which also works like a brain, but the manner speed at so many other properties are much more than a men's brain.

Modern age is an age of computer. Computer has just become a part of our life. The computer education in India was started in somewhere in sixties. Now with the advent of microcomputer, it has become possible to have mass education in this field. The major advantage of computers is the speed which calculated are the and relative of output comes. Computer can store much information and solve our problem within very short duration.

So keeping these things in views, I have computerized my small project work "**Engineering Entrance E-Counselling Portal**".I have maintained this project work on the suitable and advance language i.e. "**PHP**".

OBJECTIVE

The objectives of the system are-

- To reduce paperwork.
- Reduced operational time.
- Increased accuracy and reliability.
- Increased operational efficiency.
- Data security.
- Implementing Transparency.

This software package can be readily used by non-programming personal avoiding human handled chance of error. This project is used by two types of users

i. Candidates.

ii. Admin users.

Candidates can create their accounts and see the colleges and streams by theirs respectable ranks and fill their choices accordingly.

Admin Head can maintain daily updates in details and print reports according to need. Administrator is must be an authorized user.

Application can be upgraded according to user's and administrator's requirements with little changes.

New features can be added as per requirements.

SCOPE

This project has a large scope as it has the following features which help in making it easy to use, understand and modify it:

- Easy to online drafting.
- No Need to do Paper Work.
- To save the environment by using paper free work.
- To increase the accuracy and efficiency of the seat allotment procedure.
- Management of Candidate's Data.

This website e can be readily used by non-programming personal avoiding human handled chance of error. This project is used by two types of users

i. Candidates.

ii. Admin users.

Main Points are:-

- Simplified Management of Cuandidate's Profiles.
- Choice filling Details.
- College and seat Information
- Last year cutoff information
- Allotment Results.

SIGNIFICANCE OF PROJECT

The significance of the project is to provide the following benefits:

- The significance of project is to provide online information of college seats and last year cutoffs.
- Candidate can collect various type of information online.
- Query about anything can be asked online.
- Candidate is able to select seats and make transaction from home.
- Get the Allotment of seats.

MODIFICATION AND IMPROVEMENT OVER THE EXISTING IMPLEMENTATION

Present State:

- No Software present at all.
- Time consumed in accessing the records of the College seats and cutoffs.
- Manual creation of lists for various activity
- Student is informed by calling.
- Headache of counselling cell is more to manage the information of students manually.
- More time taken to registration of enquiry on registration forms.

After implementation of project:

- Easy to use this software.
- Customer can register online no rush for registration in counselling department.
- Respective eligible Candidates can get informed by online.
- Report of students according to need of counselling cell can be generated easily.
- Burden of Information cell decreases.

Proposed System

This project belongs to the category of distributed software as use the applications ON **Engineering Entrance E-Counselling Portal** can it? It is a network application, more than one user can use it.

Hardware/Software Requirement (minimum)

Hardware

- C.P.U. : Core 2 Due
- Motherboard : Intel chip/ original based Pentium pc
- RAM : 1 GB
- Monitor : color (SVGA)
- Resolution : 800*600
- HDD : 160 GB

Software

- Operating system : windows 7
- IDE : Notepad or Dream viewer
- Design : Photo Shop
- Server : Wamp Server
- Browser : Preferred Chrome

Database Requirement

MSQL

MSSQL: - Microsoft SQL Server is a relational database management system developed by Microsoft. As a database, it is a software product whose primary function is to store and retrieve data as requested by other software applications, be it those on the same computer or those running on another computer across a network (including the Internet). There are at least a dozen different editions of Microsoft SQL Server aimed at different audiences and for different workloads (ranging from small applications that store and retrieve data on the same computer, to millions of users and computers that access huge amounts of data from the Internet at the same time).

SQL

SQL Structured Query Language is a special-purpose programming language designed for managing data held in a relational database management system (RDBMS), or for stream processing in a relational data stream management system (RDSMS). Originally based upon relational algebra and tuple relational calculus, SQL consists of a data definition language, data manipulation language, and a data control language.

The scope of SQL includes data insert, query, update and delete, schema creation and modification, and data access control. Although SQL is often described as, and to a great extent is, a declarative language (4GL), it also includes procedural elements.

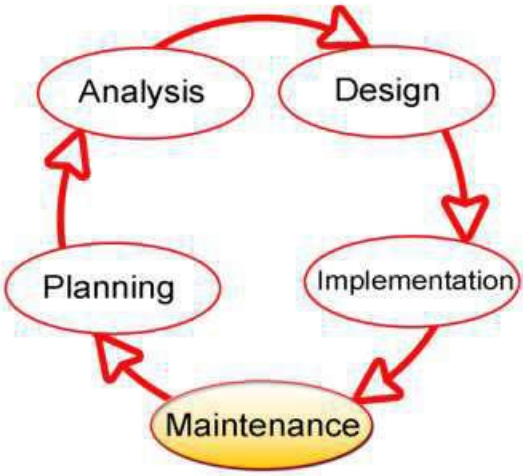
SQL was one of the first commercial languages for Edgar F. Codd's relational model, as described in his influential 1970 paper, "A Relational Model of Data for Large Shared Data Banks."[10] Despite not entirely adhering to the relational model as described by Codd, it became the most widely used database language.

SQL became a standard of the American National Standards Institute (ANSI) in 1986, and of the International Organization for Standardization (ISO) in 1987.[13] Since then, the standard has been revised to include a larger set of features. Despite the existence of such standards, though, most SQL code is not completely portable among different database systems without adjustments.

System Design

The systems development life cycle (SDLC)

The systems development life cycle (SDLC), also referred to as the application development life-cycle, is a term used in systems engineering, information systems and software engineering to describe a process for planning, creating, testing, and deploying an information system. The systems development life-cycle concept applies to a range of hardware and software configurations, as a system can be composed of hardware only, software only, or a combination of both



Planning and Requirement Analysis

Requirement analysis is the most important and fundamental stage in SDLC. It is performed by the senior members of the team with inputs from the customer, the sales department, market surveys and domain experts in the industry. This information is then used to plan the basic project approach and to conduct product feasibility study in the economical, operational, and technical areas.

Defining Requirements

Once the requirement analysis is done the next step is to clearly define and document the product requirements and get them approved from the customer or the market analysts. This is done through .SRS. . Software Requirement Specification document which consists of all the product requirements to be designed and developed during the project life cycle.

Database Dictionary

Candidate table:

Name	Type	Collation	Attributes	Null	Default
enrollment	int(20)			No	*None*
nam	varchar(50)	utf8mb4_general_ci		Yes	*NULL*
aadhar	int(20)			Yes	*NULL*
dob	date			Yes	*NULL*
email	varchar(100)	utf8mb4_general_ci		Yes	*NULL*
phone	int(10)			Yes	*NULL*
father	varchar(50)	utf8mb4_general_ci		Yes	*NULL*
mother	varchar(50)	utf8mb4_general_ci		Yes	*NULL*
gender	varchar(10)	utf8mb4_general_ci		Yes	*NULL*
religion	varchar(10)	utf8mb4_general_ci		Yes	*NULL*
cast	varchar(10)	utf8mb4_general_ci		Yes	*NULL*
nationality	varchar(10)	utf8mb4_general_ci		Yes	*NULL*
tfw	varchar(5)	utf8mb4_general_ci		Yes	*NULL*
pc	varchar(5)	utf8mb4_general_ci		Yes	*NULL*
diistict	varchar(30)	utf8mb4_general_ci		Yes	*NULL*
password	varchar(20)	utf8mb4_general_ci		Yes	*NULL*
10th	int(3)			Yes	*NULL*
10thB	varchar(100)	utf8mb4_general_ci		Yes	*NULL*
12th	int(3)			Yes	*NULL*
12thB	varchar(100)	utf8mb4_general_ci		Yes	*NULL*
rank	int(10)			Yes	*NULL*
quota	int(10)			Yes	*NULL*
locking	int(1)			No	0

College Table:

Name	Type	Collation	Attributes	Null	Default
cid	int(10)			No	None
collage_name	varchar(100)	utf8mb4_general_ci		No	None
type	varchar(10)	utf8mb4_general_ci		No	None

Subject table:

Name	Type	Collation	Attributes	Null	Default
sid	int(100)			No	None
name	varchar(100)	utf8mb4_general_ci		No	None

Student choice table:

Name	Type	Collation	Attributes	Null	Default
id	int(3)			No	None
sid	int(20)			No	None
cid	int(20)			No	None
status	int(1)			No	0

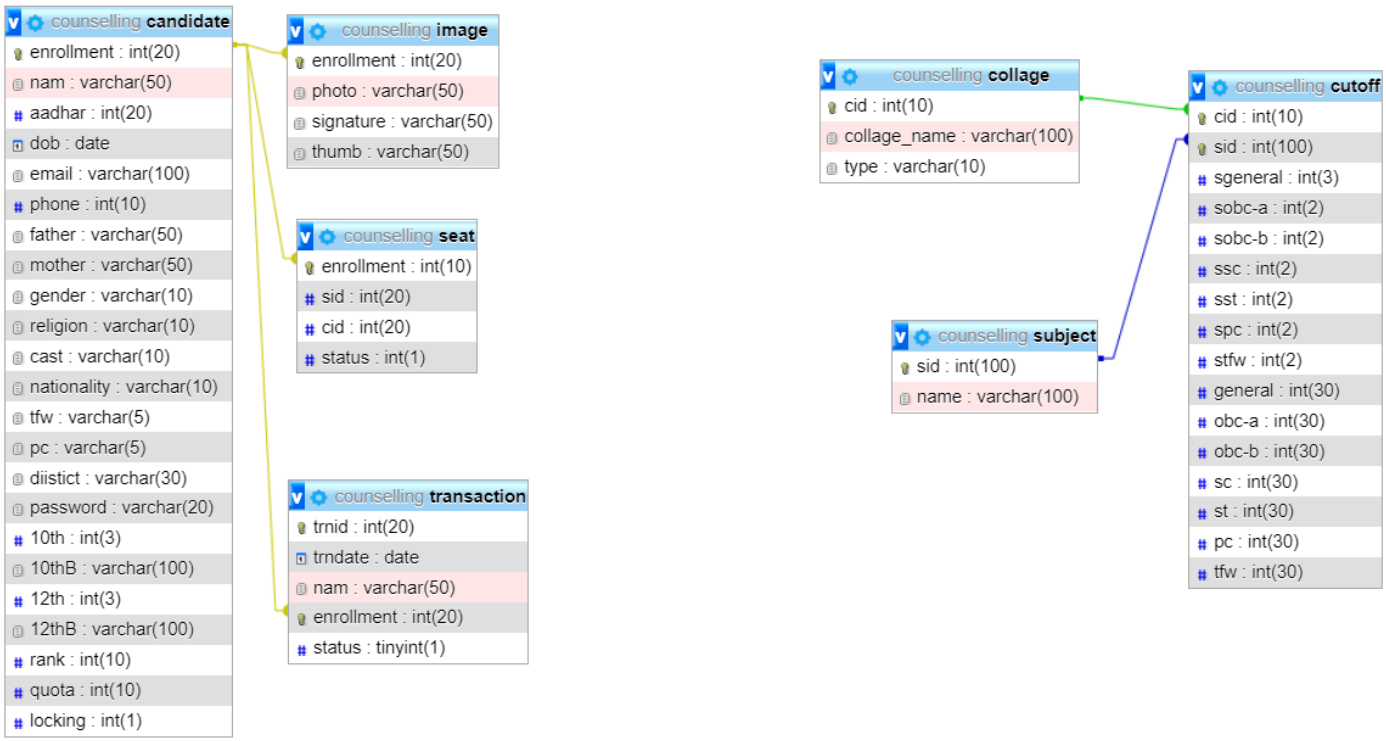
Seat allotment information table:

Name	Type	Collation	Attributes	Null	Defau
enrollment	int(10)			No	None
sid	int(20)			No	None
cid	int(20)			No	None
status	int(1)			No	None

Transaction table:

Name	Type	Collation	Attributes	Null	Default
trnid	int(20)			No	*None*
trndate	date			No	current_timestamp()
nam	varchar(50)	utf8mb4_general_ci		No	*None*
enrollment	int(20)			No	*None*
status	tinyint(1)			No	0

Database Design



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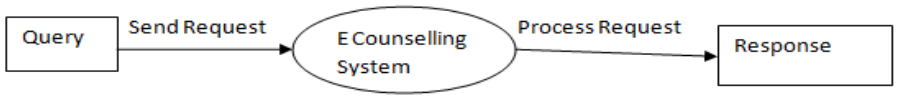
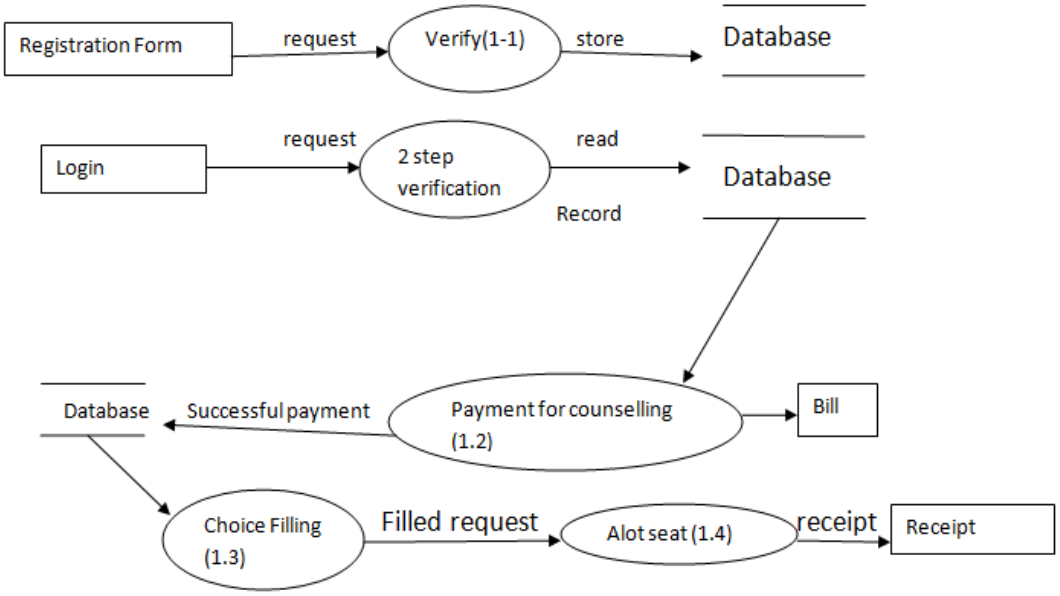


Level 0 Dfd



Level 1 Dfd

Server Side Technology

PHP

PHP is a server-side scripting language designed for web development but also used as a general-purpose programming language. Originally created by Rasmus Lerdorf in 1994,[3] the PHP reference implementation is now produced by The PHP Group.[4] PHP originally stood for Personal Home Page, but it now stands for the recursive backronym 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 system 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.

The standard PHP interpreter, powered by the Zend Engine, is free software released under the PHP License. PHP has been widely ported and can be deployed on most web servers on almost every operating system and platform, free of charge. The PHP language evolved without a written formal specification or standard until 2014, leaving the canonical PHP interpreter as a de facto standard. Since 2014 work has been ongoing to create a formal PHP specification.

PHP development began in 1994 when Rasmus Lerdorf wrote several Common Gateway Interface (CGI) programs in C, which he used to maintain his personal homepage. He extended them to work with web forms and to communicate with databases, and called this implementation "Personal Home Page/Forms Interpreter"
or PHP/FI.

PHP/FI could be used to build simple, dynamic web applications. To accelerate bug reporting and improve the code, Lerdorf initially announced the release of PHP/FI as "Personal Home Page Tools (PHP Tools) version 1.0" on the Usenet discussion group comp.infosystems.www.authoring.cgi on June 8, 1995. This release already had the basic functionality that PHP has as of 2013. This included Perl-like variables, form handling, and the ability to embed HTML. The syntax resembled that of Perl but was simpler, more limited and less consistent.

Early PHP was not intended to be a new programming language, and grew organically, with Lerdorf noting in retrospect: "I don’t know how to stop it, there was never any intent to write a programming language I have absolutely no idea how to write a programming language, I just kept adding the next logical step on the way." A development team began to form and, after months of work and beta testing, officially released PHP/FI 2 in November 1997.
The fact that PHP was not originally designed but instead was developed organically has led to inconsistent naming of functions and inconsistent ordering of their parameters. In some cases, the function names were chosen to match the lower-level libraries which PHP was "wrapping", while in some very early versions of PHP the length of the function names was used internally as a hash function, so names were chosen to improve the distribution of hash values

Client side technology

HTML

HyperText Markup Language, commonly referred to as HTML, is the standard markup language used to create web pages. Along with CSS, and JavaScript, HTML is a cornerstone technology, used by most websites to create visually engaging web pages, user interfaces for web applications, and user interfaces for many mobile applications.[1] Web browsers can read HTML files and render them into visible or audible web pages. HTML describes the structure of a website semantically along with cues for presentation, making it a markup language, rather than a programming language.

HTML elements form the building blocks of all websites. HTML allows images and objects to be embedded and can be used to create interactive forms. It provides a means to create structured documents by denoting structural semantics for text such as headings, paragraphs, lists, links, quotes and other items.

The language is written in the form of HTML elements consisting of tags enclosed in angle brackets (like <html>). Browsers do not display the HTML tags and scripts, but use them to interpret the content of the page.

HTML can embed scripts written in languages such as JavaScript which affect the behavior of HTML web pages. Web browsers can also refer to Cascading Style Sheets (CSS) to define the look and layout of text and other material. The World Wide Web Consortium (W3C), maintainer of both the HTML and the CSS standards, has encouraged the use of CSS over explicit presentational HTML since 1997.

CSS

Cascading Style Sheets (CSS) is a style sheet language used for describing the presentation of a document written in a markup language. Although most often used to set the visual style of web pages and user interfaces written in HTML and XHTML, the language can be applied to any XML document, including plain XML, SVG and XUL, and is applicable to rendering in speech, or on other media. Along with HTML and JavaScript, CSS is a cornerstone technology used by most websites to create visually engaging webpages, user interfaces for web applications, and user interfaces for many mobile applications.

CSS is designed primarily to enable the separation of document content from document presentation, including aspects such as the layout, colors, and fonts.[3]

This separation can improve content accessibility, provide more flexibility and control in the specification of presentation characteristics, enable multiple HTML pages to share formatting by specifying the relevant CSS in a separate .css file, and reduce complexity and repetition in the structural content, such as semantically insignificant tables that were widely used to format pages before consistent CSS rendering was available in all major browsers. CSS makes it possible to separate presentation instructions from the HTML content in a separate file or style section of the HTML file. For each matching HTML element, it provides a list of formatting instructions. For example, a CSS rule might specify that "all heading 1 elements should be bold", leaving pure semantic HTML markup that asserts "this text is a level 1 heading" without formatting code such as a <bold> tag indicating how such text should be displayed.

Java script

JavaScript is a high-level, dynamic, untyped, and interpreted programming language. It has been standardized in the ECMAScript language specification. Alongside HTML and CSS, it is one of the three essential technologies of World Wide Web content production; the majority of websites employ it and it is supported by all modern Web browsers without plug-ins. JavaScript is prototype-based with first-class functions, making it a multi-paradigm language, supporting object-oriented, imperative, and functional programming styles. It has an API for working with text, arrays, dates and regular expressions, but does not include any I/O, such as networking, storage, or graphics facilities, relying for these upon the host environment in which it is embedded.

Despite some naming, syntactic, and standard library similarities, JavaScript and Java are otherwise unrelated and have very different semantics. The syntax of JavaScript is actually derived from C, while the semantics and design are influenced by the Self and Scheme programming languages.

JavaScript is also used in environments that are not Web-based, such as PDF documents, site-specific browsers, and desktop widgets. Newer and faster JavaScript virtual machines (VMs) and platforms built upon them have also increased the popularity of JavaScript for server-side Web applications. On the client side, JavaScript has been traditionally implemented as an interpreted language, but more recent browsers perform just-in-time compilation. It is also

used in game development, the creation of desktop and mobile applications, and server-side network programming with runtime environments such as Node.js.

Deployment and Testing

Designing the product architecture

SRS is the reference for product architects to come out with the best architecture for the product to be developed. Based on the requirements specified in SRS, usually more than one design approach for the product architecture is proposed and documented in a DDS - Design Document Specification.

Testing the Product

This stage is usually a subset of all the stages as in the modern SDLC models, the testing activities are mostly involved in all the stages of SDLC. However this stage refers to the testing only stage of the product where products defects are reported, tracked, fixed and retested, until the product reaches the quality standards defined in the SRS.

Deployment in the Market and Maintenance

Once the product is tested and ready to be deployed it is released formally in the appropriate market. Sometime product deployment happens in stages as per the organizations. business strategy. The product may first be released in a limited segment and tested in the real business environment (UAT- User acceptance testing).

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