

Creation of a Radio Astronomy database using ColdFusion.

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Our Project

- Learn and understand the basics of HTML
- Learn how to build a database using Microsoft Access or MySQL
- Practice Structured Query Language Programming
- Use and Understand the Application Server ColdFusion.
- Create a database for radio-astronomy data

Hyper Text Mark-Up Language

HTML

HTML is the standard language used for displaying all web pages on the world wide web.

A web page can also be referred to as a HTML document.

Strongest Attribute: It displays great graphics

Weakest Attribute: Does not process input at all

Creating a Database using Microsoft Access

Database:

Is a collection of information organized into inter-related tables of data and specifications of data objects.

Microsoft Access:

An entry level database that offers a flexible environment for database developers and users, plus it was readily available.

Structured Query Language

SQL

A Database query language that was adopted as an industry standard. This type of language helps in selecting columns of data from a database and the commands are used to specify selection criteria

COLD FUSION

A Portal from database to the Web

A database already exists...

Why re-create it for web page publication?

WHAT IS COLD FUSION

- A rapid application development tool that enables the rapid creation of interactive, dynamic, and information rich Web-sites
- Cold Fusion provides you with a full range of database interaction functions to create complete dynamic, data driven web-pages

Cold Fusion is a powerful application server with a very flexible programming language.

It has a strong relational database interface and is fully SQL compatible.

Programmers can include SQL code directly in Cold Fusion programs.

THERE ARE TWO TYPES OF WEB PAGES



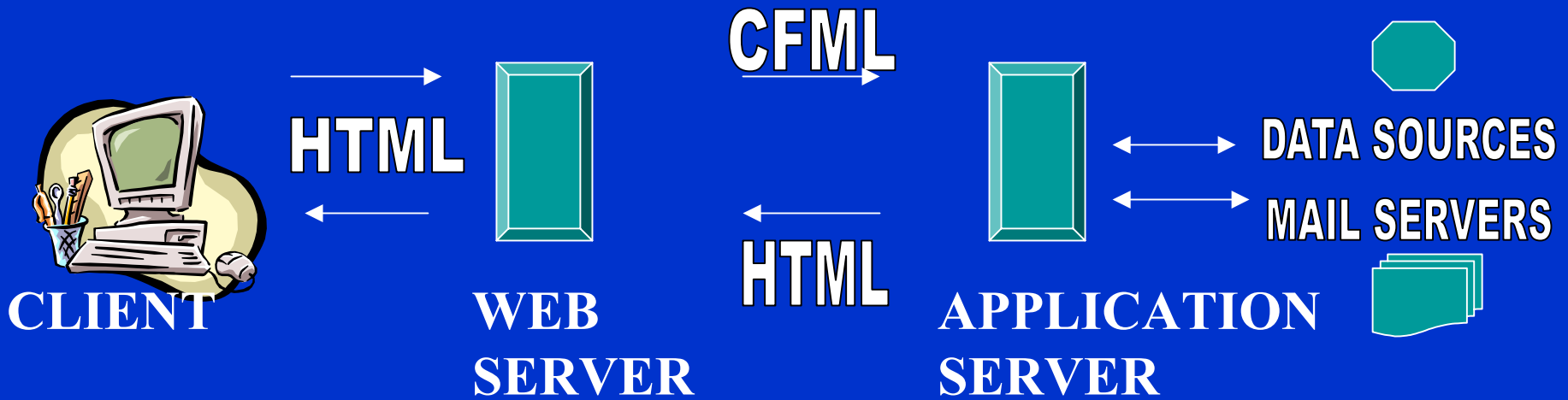
STATIC WEB PAGE



DYNAMIC WEB PAGE

ADVANTAGES OF A DYNAMIC PAGE

- Contains very little text
- Pulls needed information from other applications
- Dynamic web pages communicate with databases



COMPATABILITY

Cold fusion is compatible with

1. Windows and Solaris
2. Apache and IIS (Internet Information Services)

*Cold Fusion server can be run on a Windows 2K or XP machine running apache or IIS

FUTURE WORK

Obtain data from the Radio-telescope Smiley; located at the Pisgah Astronomical Research Institute (PARI); and create a database using this information.



PARI, Rosman NC

Smiley- 4.6 meter radio telescope used to greet K-12 students, introduce them to Radio-Astronomy via the internet and make Smiley data available to them.



Sample Database

Right Ascension	Declination	Frequency (MHz)	Time	Date	Object Name
05:32:04.5	-05:24:45	1400	03:45	03:12:02	Orion Neb.
02:40:24.0	39:04:13	750	12:35	02:22:03	NGC 1023
03:10:18.1	61:19:03	1400	18:22	11:22:04	IC 289



observe objects



- 1. Co-ordinates**
- 2. Time of observation**
- 3. Radio Flux**



Radio Astronomer



Database and CF server



Accessed by K-12 students

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