

# **Building a Multimedia Web Database Using Director and ColdFusion**

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## **Introduction (The Facts)**

There are now over a half million Web sites that attract millions of visitors daily. Most Web sites are being used as electronic replacements for newspapers, magazines, brochures, and bulletin boards. The Web offers ways to enhance these publications using audio, images, animation, multimedia, and even virtual reality.

All information is available at your fingertips-Literally. However, Web sites are capable of being much more than electronic versions of paper publications because of the underlying technology that makes the Web tick. Users can interact with you and your company, collect and process mission-critical information in real time, provide new levels of user support, and much more. To do that, we need sort of technical criteria, we called, Multimedia Web Database. Here are some facts.

- A research report commissioned by International Data Corp. (IDC) states that companies building commercial Web sites can expect hardware and system software to consume 20 percent of a Web site's overall budget; the remaining 80 percent goes to custom software development and integration.
- Another research study conducted by the Gartner Group, Inc., shows that companies building business applications for the Web are not meeting the demands of their customers. According to the study, 90 percent of enterprises conducting business via Web sites are not delivering the kind of services and information customers want.
- Current estimates through various surveys and studies indicate that nearly 80% of all Fortune 500 firms now have some sort of formal presence on the Web, but that 20% of those are reconsidering their commitment to expanding or even maintaining their Web sites in the future, because the financial results do not indicate a successful exploitation of all that the Web has to offer.

## **Significance (Merging Web Database with Multimedia)**

As I mentioned it above Introduction part, Multimedia Web Database is the way to go for the next Web sites. One of the obvious goals for publishing information on the Web is to make the data available to potential customers so that they may browse through product inventories, course offerings, property listings, flight schedules, etc. So, a number of quality e-commerce application development environments are available for building database-enabled sites.

However, it is not easy to build a database on the Web because there are so many solutions and various platforms based on programmers. Therefore, general people who are not familiar with programming languages like C need script based simple and easy tools but powerful. Therefore, I would like to recommend ColdFusion as a easy and powerful Web database tool.

We also need Multimedia tools to present any combination of text, graphic art, sound, animation, and video on the Web. As a multimedia tool, I would like to use Director first, but later I would like to mention about Flash (because I am studying it now). I would like to explain how to build a Multimedia Web Database step by step.

### **Step 1: Checking Hardware and Software Platform**

ColdFusion supports Windows, NT, LINUX, Solaris but Macintosh. Personally I prefer to use Windows NT as Operating System with IIS as a Web Server. However, when you develop the program, you can use your Windows 98 with Personal Web Server. Whenever you finish your job, just ftp to your Server. On your desktop PC, MS Access should be in it to build a database file.

Director supports both, PC Windows and Mac. So, it does not matter whether you use PC or Mac. When you finish your job with Director, you should save your file with Shockwave type. For image file editing, Photoshop is essential.

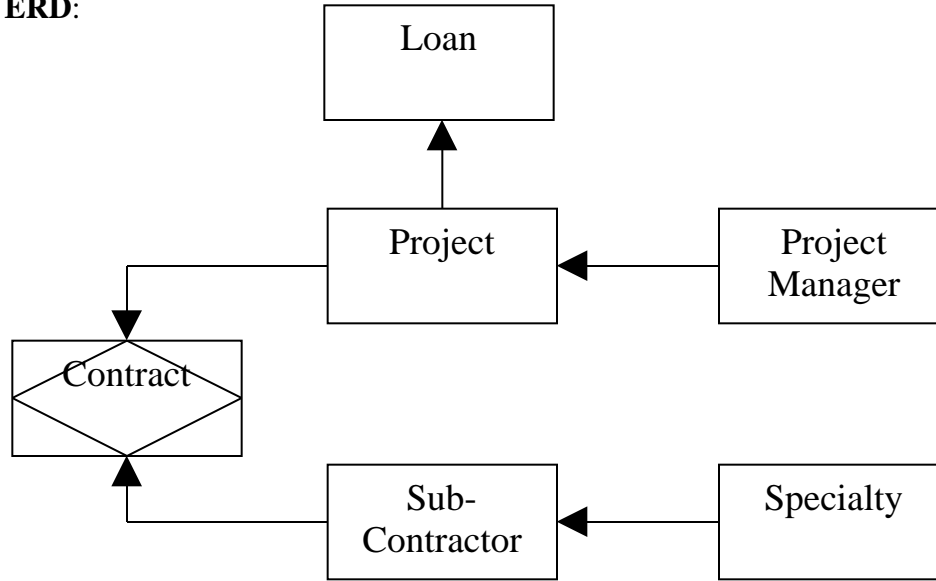
## **Step 2: Data Modeling**

Data Modeling is essential to design a database before you create tables. You may use the Entity-Relationship Model (ERD) for your data modeling. Here is an example,

1. **Task:** Project & Contract Database
2. **Situation:**

ABC Development Corporation is a builder/developer of commercial buildings on which they need to keep information. In addition to other information, they assign unique project numbers to each of the projects they have. Each project is assigned to only one project manager (identified by a unique employee number with other information, such as name). Project managers usually have several projects under their direction at one time. Each project is usually associated with several subcontractors. These subcontractors (identified by a unique identifier with other information) specialize in only one line of work (e.g., heating, plumbing, etc.). A specialization is identified by a unique code and includes other information. ABC likes to use subcontractors with whom they are familiar, so a given subcontractor will often be hired to work on several projects during the year. However, they have too many projects to permit one subcontractor to supply all of a particular specialty (for example, they need more than one plumbing subcontractor). Projects are usually financed by loans. Each project may be financed by several loans although a specific loan is restricted to a single project. Loans are identified by a unique loan identification number and also include other information such as amount, payment amount, etc.

### 3. ERD:



### 4. Logical Schema:

- **Project** { Project ID, Name, Budget, *Manager ID* }
- **Project Manager** { Manager ID, Name, Phone }
- **Loan** { Loan ID, Amount, Monthly Payment, *Project ID* }
- **Sub-Contractor** { Sub-Contractor ID, Name, Phone, *Specialty ID* }
- **Specialty** { Specialty ID, Description }
- **Contract** { *Project ID*, *Sub-Contractor ID*, Amount, Due Date }

## Step 3: Building a Database File using Access

Now, you can define tables with fields according to your logical schema using MS Access tool. You do not have to key in all data (Just a couple of samples are enough). If you save your database file, it will be saved as *databaseName.mdb* file.

## **Step 4: Setting your Database File on your PC**

On your PC, make sure that Personal Web Server and ColdFusion Server are installed. Now, you need to set ODBC for your database file to achieve by using Control Panel. And, set Virtual Directory on your script directory for web sharing, clicking folder property. Now read to go! You may use ColdFusion Studio to edit your html scripts.

## **Step 5: Script Coding using ColdFusion**

## **Step 6: User Interface Design**

## **Step 7: Preparing Elements**

## **Step 8: Making a Score Board using Director**

## **Step 9: Combine Together**

## **Step 10: Test and Feedback**

## **Summary**

## **References**

## **Related Links**

## **Author Info**

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