



# Pemrograman Web

## 14. Uploading Files to MySQL Database.

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# Introduction

- Using PHP to upload files into MySQL database sometimes needed by some web application.
  - For instance for storing pdf documents or images to make some kind of online briefcase.
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For the first step, let's make the table for the upload files. The table will consist of.

- id : Unique id for each file
  - name : File name
  - type : File content type
  - size : File size
  - content : The file itself
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- For column content we'll use BLOB data type.
  - BLOB is a binary large object that can hold a variable amount of data.
  - MySQL have four BLOB data types, they are :
    - TINYBLOB
    - BLOB
    - MEDIUMBLOB
    - LONGBLOB
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- Since BLOB is limited to store up to 64 kilobytes of data we will use MEDIUMBLOB so we can store larger files ( up to 16 megabytes ).
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# Table upload

```
CREATE TABLE upload ( id INT NOT NULL  
    AUTO_INCREMENT, name VARCHAR(30)  
    NOT NULL, type VARCHAR(30) NOT NULL,  
    size INT NOT NULL, content BLOB NOT  
    NULL, PRIMARY KEY(id) );
```

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upload.php

Open upload.doc

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# the autoglobal `$_FILES`

- `$_FILES['userfile']['name']`  
The original name of the file on the client machine.
  - `$_FILES['userfile']['type']`  
The mime type of the file, if the browser provided this information. An example would be "image/gif".
  - `$_FILES['userfile']['size']`  
The size, in bytes, of the uploaded file.
  - `$_FILES['userfile']['tmp_name']`  
The temporary filename of the file in which the uploaded file was stored on the server.
  - `$_FILES['userfile']['error']`  
The error code associated with this file upload. ['error'] was added in PHP 4.2.0
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# Downloading Files From MySQL Database

- The download page list the file names stored in database.
  - The names are printed as a url.
  - The url would look like `download.php?id=3`.
  - When you click the download link, the `$_GET['id']` will be set
  - Source code : `download.doc`
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- Before sending the file content using echo first we need to set several headers. They are :
    - `header("Content-length: $size")`  
This header tells the browser how large the file is. Some browser need it to be able to download the file properly. Anyway it's a good manner telling how big the file is. That way anyone who download the file can predict how long the download will take.
    - `header("Content-type: $type")`  
This header tells the browser what kind of file it tries to download.
    - `header("Content-Disposition: attachment; filename=$name");`  
Tells the browser to save this downloaded file under the specified name. If you don't send this header the browser will try to save the file using the script's name (download.php).
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# Uploading Files To File Server Using PHP

- Now, we will make another upload script. But this time we won't save the file in the database.
  - We will only store the file info there but the real file is stored in the file server.
  - We need a little modification to the upload table
  - Instead of using BLOB datatype we just use VARCHAR to store the file path.
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# Table upload2

```
CREATE TABLE upload2 (  
  id INT NOT NULL AUTO_INCREMENT,  
  name VARCHAR(30) NOT NULL,  
  type VARCHAR(30) NOT NULL,  
  size INT NOT NULL,  
  path VARCHAR(60) NOT NULL,  
  PRIMARY KEY(id)  
);
```

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# File : upload2.php

The HTML form we use is no different with the previous one since the real changes will take place in the PHP codes.

Open upload2.doc

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- Okay, now let's take a look at the upload process.
  - First we need to specify the directory to store the uploaded files. We store the directory name in `$uploadDir`
  - Note that PHP **must have write access** to `$uploadDir` or else the upload will fail.
  - If you're web host using a Linux server you may need to set the permission for the upload directory to `777`.
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- The key here is the `move_uploaded_file()` function.
  - This function will move the uploaded files from the temporary upload directory to the location that we earlier ( `$uploadDir . $fileName` ).
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# Downloading

- For listing the download files we just need to copy from the previous script. The real difference start when you click on the download link.
  - Open download2.doc
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# The Problems

- Preventing direct access to the uploaded files
  - Handling duplicate file names
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# Preventing direct access

- For this example the upload directory where the files are stored is `/home/arman198/public_html/examples/upload/files/`.
  - This is ( usually ) a bad thing because anyone can see directly the file list and download them all.
  - Solution, example : Add `index.html`
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# Handling duplicate file names

- To prevent this we just need to modify the file name.
  - In this example the file names are changed into a random string, 32 characters long.
  - Open upload3.doc
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- First we extract the file extension from the file name using `strrchr()` function combined with `substr()`.
  - Then using `md5()` we generate the 32 characters long of random string.
  - It will look something like  
7d1d1da5aac5ad72b293165e8e6fe89b
  - After we join them up we get the new unique file name.
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# Contoh Aplikasi

DATA TUGAS AKHIR	
Nama	<input type="text"/>
NRP	<input type="text"/>
Tahun Lulus	2006 <input type="button" value="v"/>
Jurusan	D4 Teknik Elektronika <input type="button" value="v"/>
Pembimbing 1	<input type="text"/>
Pembimbing 2	<input type="text"/>
Pembimbing 3	<input type="text"/>
Pembimbing 4	<input type="text"/>
Judul Tugas Akhir	<input type="text"/>
Abstrak Tugas Akhir	<input type="text"/>
File Tugas Akhir (PDF)	<input type="text"/> <input type="button" value="Browse..."/>
	<input type="button" value="Upload"/>

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# FINISH

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