WEB APPLICATION DEVELOPMENT

Lecture 6

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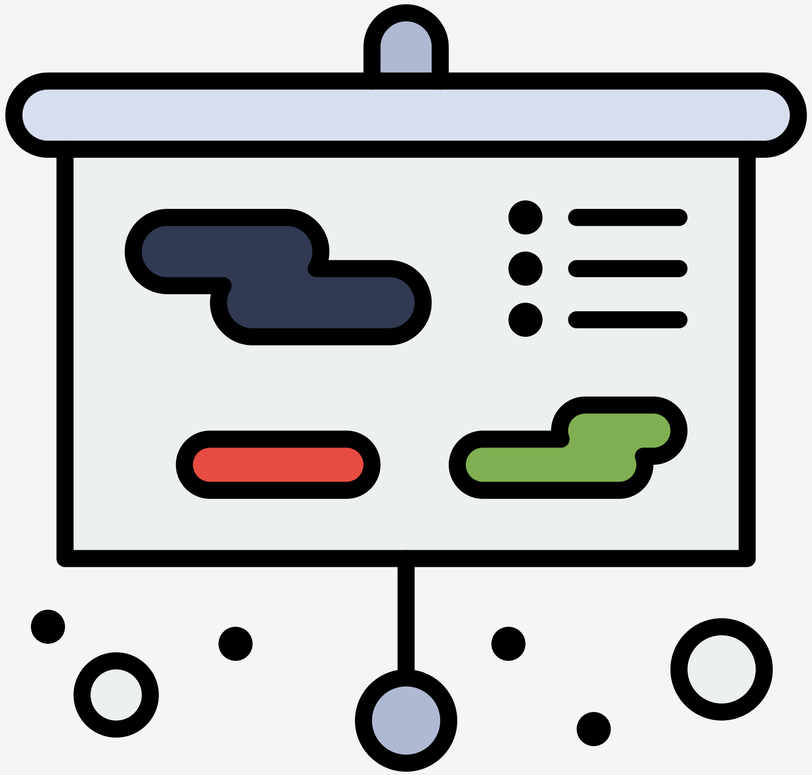
TODAY'S TOPICS

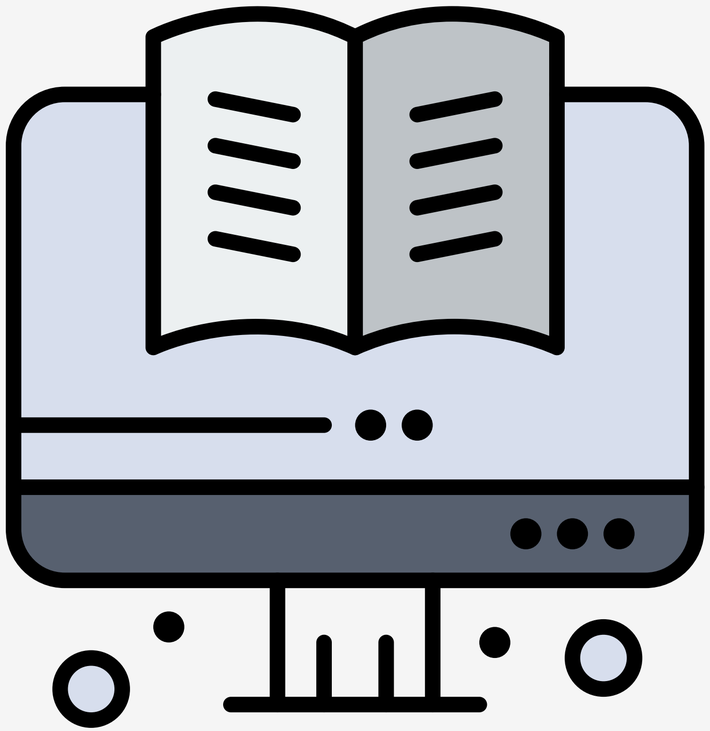


- File Handling

QUESTIONS

FILE HANDLING

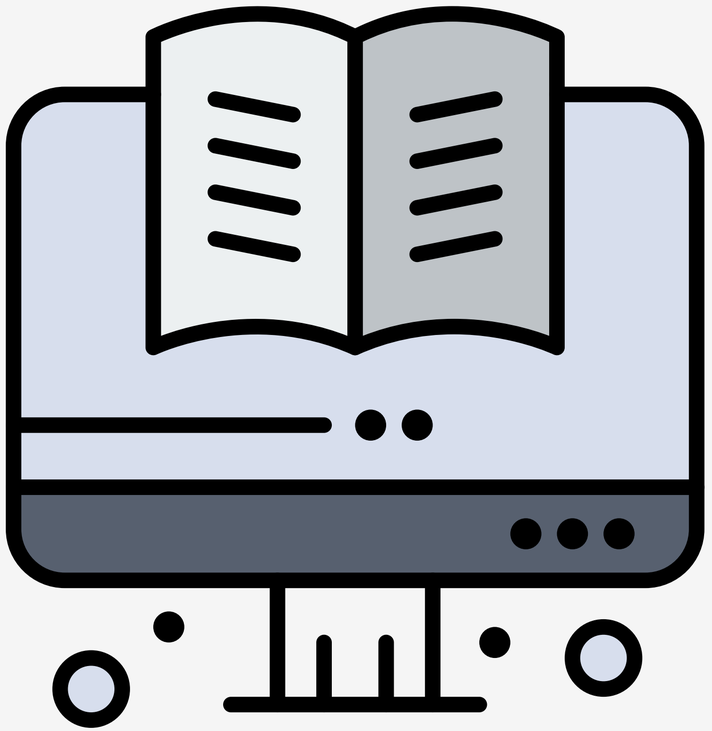
SERVER CONFIGURATIONS



- The PHP Server must be configured to allow a user to upload a file
- These configuration settings are found in the php.ini file
- By default, most development and production environments allow for uploads
- Other settings may need to be updated depending on the project

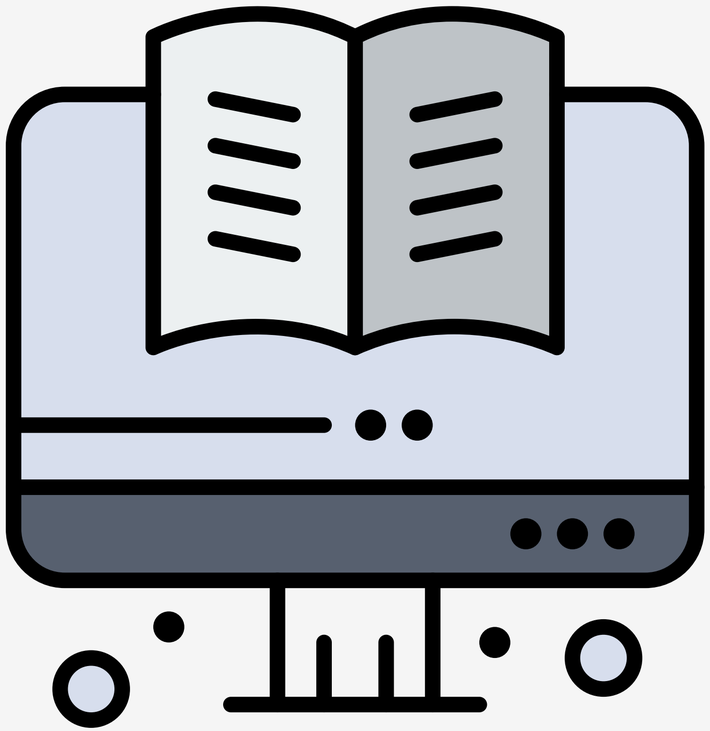
Setting	Default	Description
max_execution _time	36000 (Laragon) 30 (Valet)	The maximum number of second that a PHP script can run.
max_input_time	60	The maximum number of seconds allowed to parse a form
max_file_uploads	20	The maximum number of files the user can upload at a time.
upload_tmp_dir	C:\windows\temp (Windows) /tmp (macOS)	The folder where PHP temporarily stores the uploaded files
upload_max_filesize	2G (Laragon) 512M (Valet)	The maximum file size of a single uploaded file
post_max_size	2G (Laragon) 512M (Valet)	The maximum size of all $_POST and $_FILES data.
memory_limit	512M	The total memory allocated to PHP

UPLOADING FILES



- The `<input type="file">` allows the user to choose one or more files to be uploaded to the server
- The `accept` attribute limits the type of files that can be accepted
- The `multiple` attribute allows the user to select more than one file
- When including file upload, the `<form>` tag must include `enctype="multipart/form-data"`

UNIQUE FILE TYPE SPECIFIERS

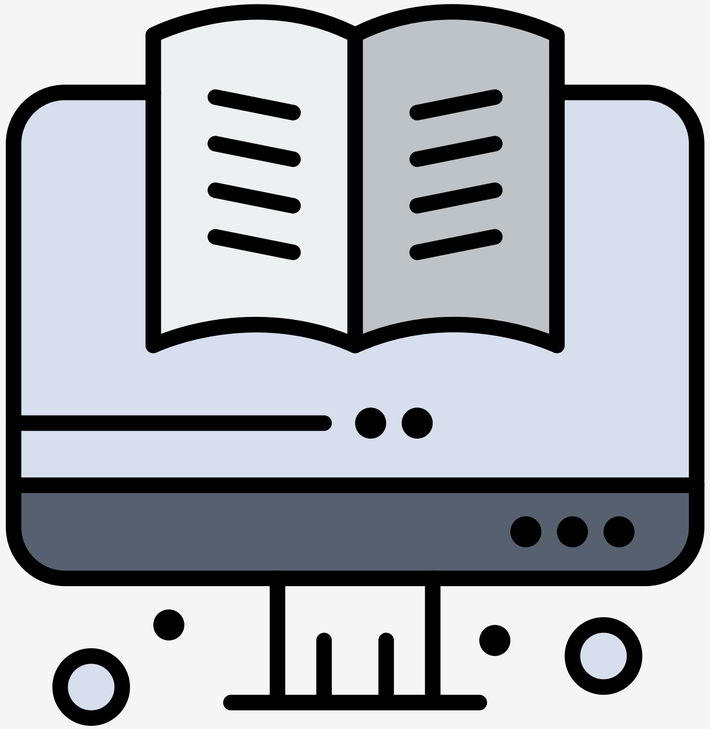


- The `accept` attribute takes a comma-separated list of specifiers
- A valid filename extension starting with a period (`.jpg`, `.pdf`)
- The string `audio/*` for any audio file
- The string `video/*` for any video file
- The string `image/*` for any image file

UPLOADING FILES

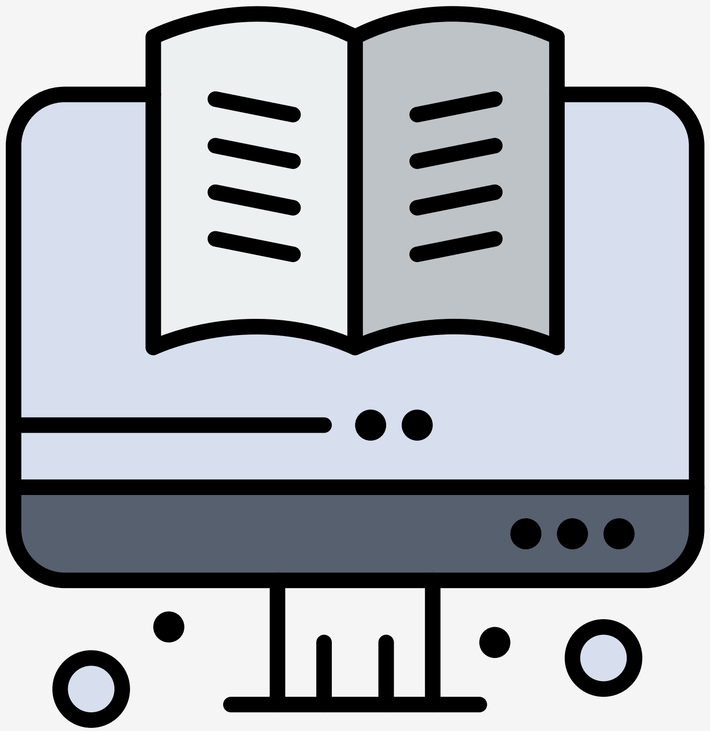
```
<form method="post"
  enctype="multipart/form-data">
  <input
    type="file"
    id="image"
    name="image"
    accept="image/*"
    multiple>
</form>
```

PROCESSING FILES



- PHP can access uploaded files using the `$_FILES` superglobal variable
- The `$_FILES` will contain information about an uploaded file, including:
  - `$_FILES['image']['name']`
  - `$_FILES['image']['type']`
  - `$_FILES['image']['size']`
  - `$_FILES['image']['tmp_name']`
  - `$_FILES['image']['error']`

PROCESSING FILES

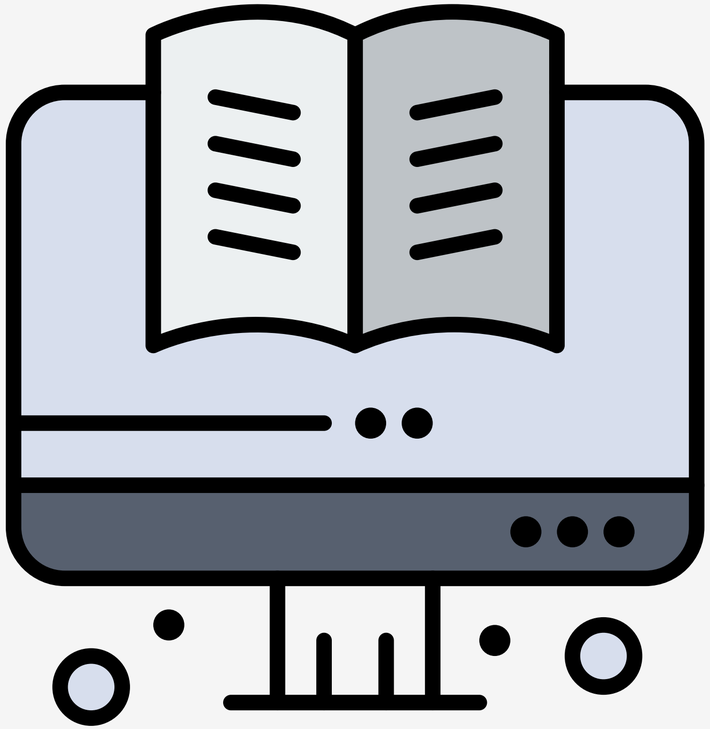


- The steps to process an uploaded file include the following:
  - Check if an error occurred during the upload
  - Retrieve the path to the temporary file
  - Move the temporary file to the desired location and with the desired name

PROCESSING FILES

```php
<?php
  if ($_FILES['image']['error'] ===
      UPLOAD_ERR_OK) {
    $name = $_FILES['image']['name'];
    $file = $_FILES['image']['tmp_name'];
    $dest = __DIR__ . '/images/' . $name;
    move_uploaded_file($file, $dest);
  }
```

FILESYSTEM FUNCTIONS



- `file_exists`: check if a file or directory exists
- `file_get_contents`: reads the entire file into a string
- `file_put_contents`: writes data to a file
- `mkdir`: creates a directory
- `move_uploaded_file`: moves an uploaded file to a location
- `unlink`: deletes a file

FILESYSTEM FUNCTIONS

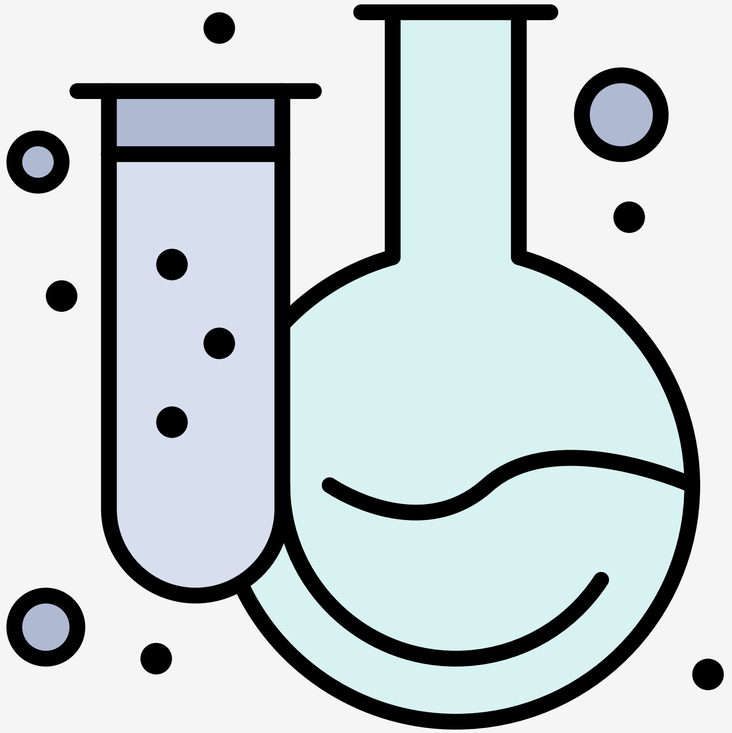
```php
<?php
  // retrieve content from the file
  $tmp = file_get_contents('tmp.txt');

  // check if directory exists
  if (!file_exists('docs')) {
    // create the directory
    mkdir('docs');
  }
  // create a new file
  file_put_contents('docs/copy.txt', $tmp);

  // delete the old file
  unlink('tmp.txt');
```

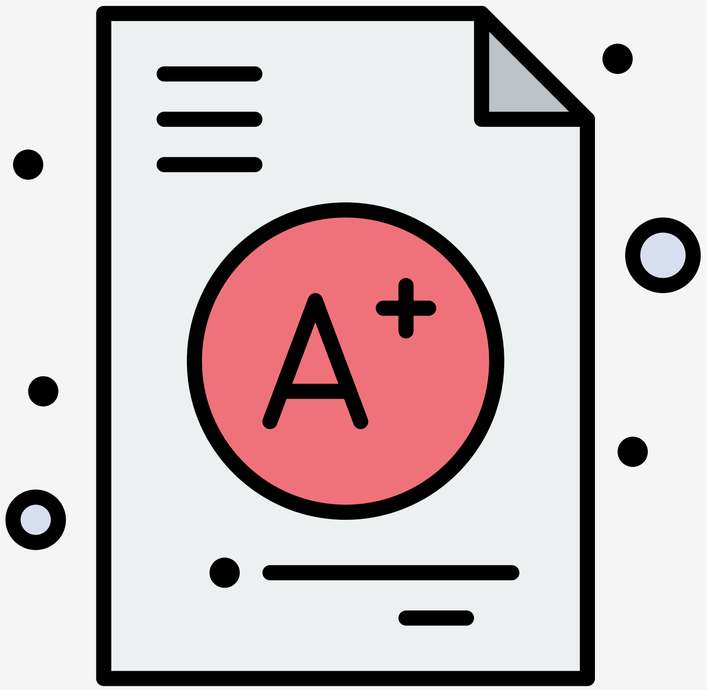
DEMO: MOVIES

LAB 6



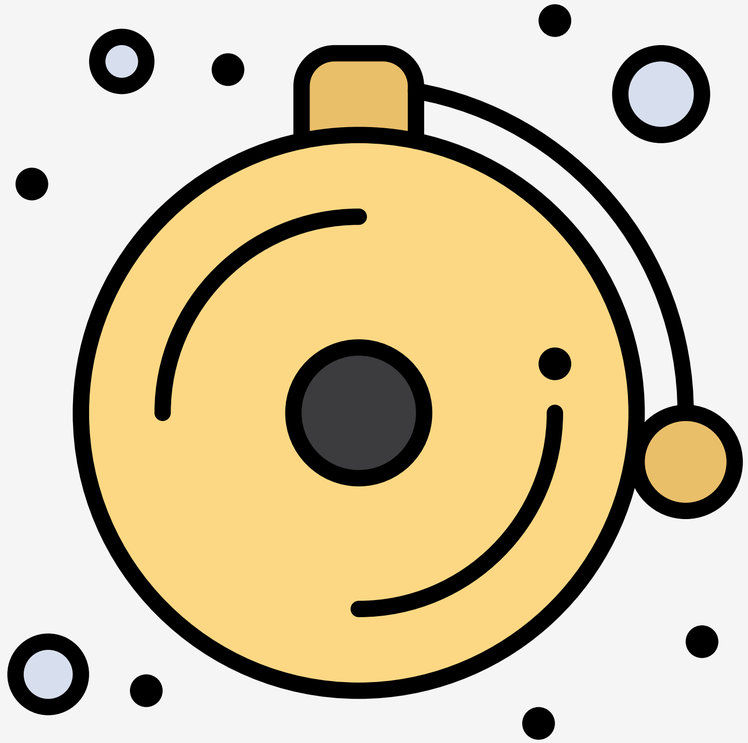
- Add the ability to upload PDFs when adding or updating an invoice
- A view "button" next to each invoice will allow the user to view the PDF
- When updating a PDF, the new PDF should replace the old one
- *DUE:* **Fri. Jun. 23 @ 11:59 PM**

MID-TERM EXAM



- Practical exam
- In-person
- Open book
- **Tue. Jun. 20 @ 2:30 PM**

NEXT TIME...



- Mid-term Exam