php

uploading files

PHP web development 2020/2021

Milena Tomova
Vratsa Software
https://vratsasoftware.com/

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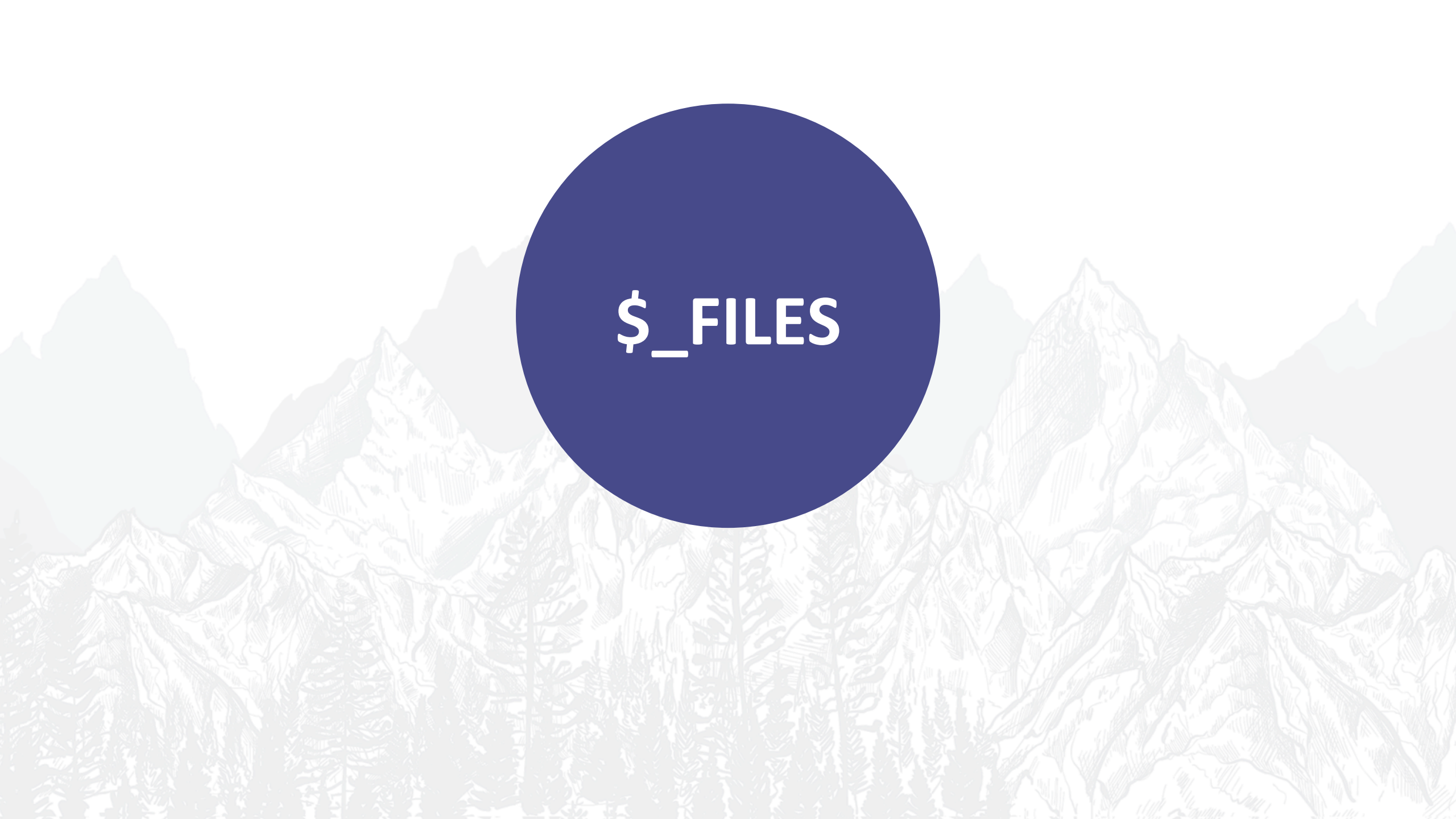
the
HTML

the HTML

Враца Софтуер Общество

```
<form method="post" action="" enctype="multipart/form-data">
    <div class="form-group">
        <label class="control-label">Enter product name</label>
        <input type="text" name="unit_name" class="form-control">
    </div>
    <div class="form-group">
        <label for="product-image">Product image</label>
            <input type="file" id="product-image" name="product_image">
    </div>
    <button type="submit" class="btn btn-default">Save</button>
</form>
```


$_FILES

$_FILES superglobal variable

$_FILES

$_FILES

This is a 'superglobal', or automatic global, variable.

This simply means that it is available in all scopes throughout a script.

There is no need to do **global $variable;** to access it within functions or methods.

same like $_POST, $_GET superglobals

$_FILES

Врача Софтуер Общество

After form submission all the uploaded files and their specifics

are stored in $_FILES superglobal.

Do not look for them in $_POST superglobal!

$_FILES

Врача Софтуер Общество

After form submission submitted data is saved in two superglobals

- files data goes to **$_FILES superglobal.**
- rest of the data is in $_POST superglobal.

$_FILES

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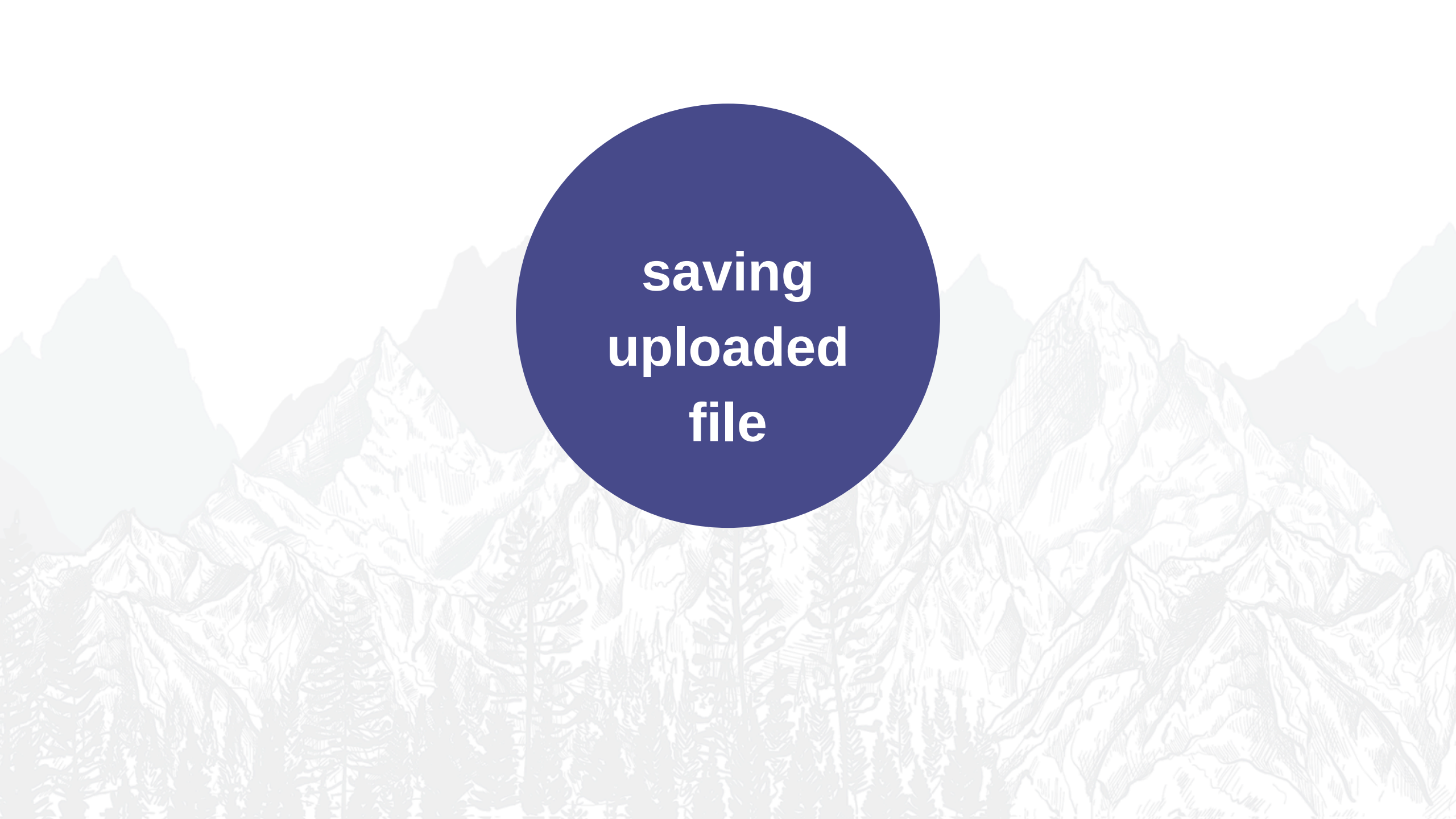
- $_FILES splits file`s data in predefined elements with indexes -

- ["name"] - *filename*
- ["type"] - filetype
- ["tmp_name"] - temprary name used to store file in the temporary file upload directory
- ["error"] - index of error occured during upload
- ["size"] - file size in bytes

see detailed info


saving
uploaded
file

Saving uploaded file

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after form`s submission, **the file** /its conent/ is stored in a **temporary directory**,
with a **temporary name**,
waiting to be moved to the desired server`s or project`s folder

Saving uploaded file

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Step 1 - moving the file to desired location

```
$uploaddir = '../uploads/';
$uploadfile = $uploaddir . basename($_FILES['product_image']['name']);


if (move_uploaded_file($_FILES['product_image']['tmp_name'], $uploadfile)) {
    echo "File is valid, and was successfully uploaded.\n";
} else {
    echo "Possible file upload attack!\n";
}
```

Saving uploaded file

Step 2 - saving file info in data base

- *filename - and repetitive data*
  - *if all files are saved in the same folder - save folder name as part of the data about the file*

```
$product_name = $_POST['product_name'];

$image = $uploadfile;


$insert_query = "INSERT INTO `products`(`product_name`, `image`) VALUES ('$product_name',
'$uploadfile')";
```

Saving uploaded file

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Keep in mind!

- *filename – if you store files with the same name in the same directory*

  the first file will be overwritten by the second one

handling file uploads

Handling file uploads

- *check for file upload errors*

```
if(!isset($_FILES['product_image']['error'])){
// code to execute if no errors occur
}
```

List of error values and messages explained

Handling file uploads

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- *check filesize - always set limit of allowed upload filesize*

```
if ($_FILES['product_image']['size'] > 1000000) {
        //code to execute if file exceeds the allowed limit
    }
```

Handling file uploads

- *Check MIME Type - **DO NOT TRUST $_FILES['product_image']['mime'] VALUE***

    - *make your own mime type validation solutions*
    - *some useful examples here*

Handling file uploads

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- *Avoid using **$_FILES['product_image']['name']** as filename for saving the uploaded file on project`s server*
- *DO NOT USE $_FILES['upfile']['name'] WITHOUT ANY VALIDATION !!*
- *You should name the file **uniquely** – using timestamps, ids, etc.*

Securing file uploads

Securing file uploads

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What are the File Upload Risks?

some of them are

- Attacking your infrastructure:
  - Overwriting an existing file
  - Malicious content
- Very large file upload

Securing file uploads

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How to Prevent File Upload Attacks

- Only allow specific file types
- Verify file types
- Remove possible embedded threats
- Set a maximum name length and maximum file size
- Randomize uploaded file names
- **Store uploaded files outside web root folder**
- Use simple error messages /that do not expose project`s file structure/

configuring file uploads

Configuring file uploads

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File uploads directives in php.ini

file_uploads

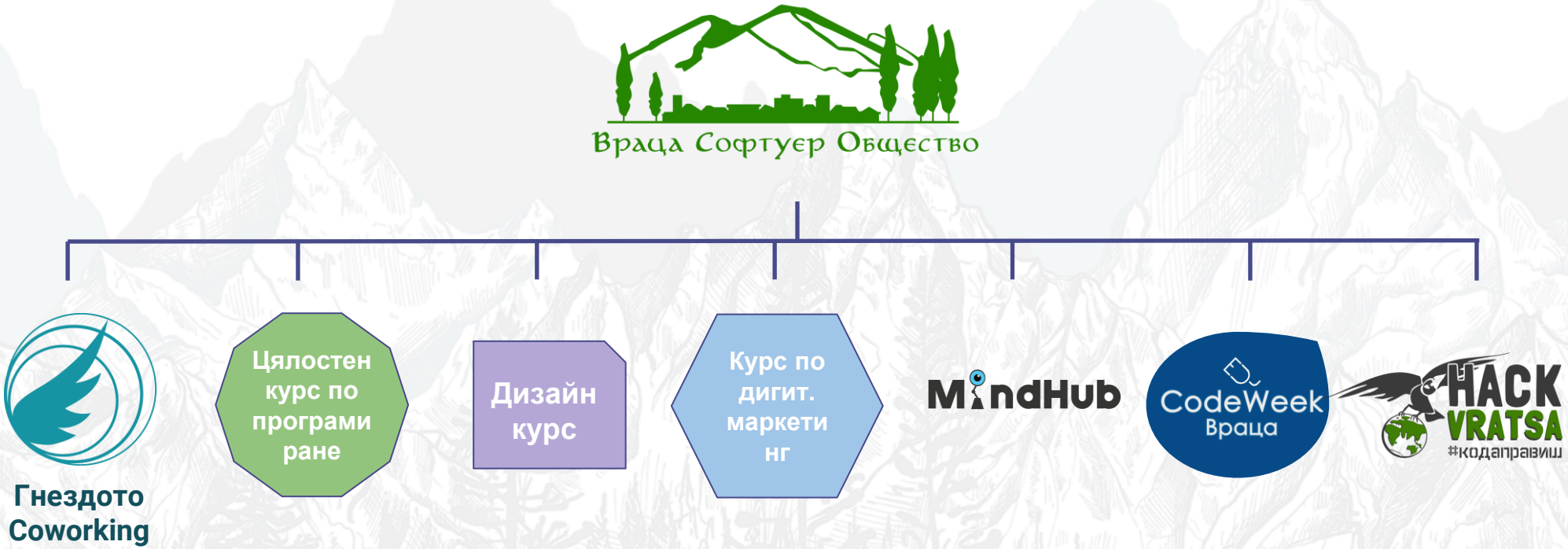
upload_max_filesize

upload_tmp_dir

post_max_size

max_input_time

Questions?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