PHP for Beginners - Session 8

Functions and Filters

In this session, we learn about defining functions in PHP and using them to filter associative arrays.

1. Why Functions?

   - Functions help encapsulate logic and avoid code duplication.

   - They make code cleaner and reusable.

2. Sample Data (Books Array):

```php
$books = [
  [
    'name' => 'Do Androids Dream of Electric Sheep?',
    'author' => 'Philip K. Dick',
    'releaseYear' => 1968,
    'purchaseUrl' => 'https://example.com/androids-dream'
  ],
  [
    'name' => 'Project Hail Mary',
    'author' => 'Andy Weir',
    'releaseYear' => 2021,
    'purchaseUrl' => 'https://example.com/hail-mary'
  ]
];
```

3. Filtering by Author in foreach:

```php
<?php foreach ($books as $book): ?>
  <?php if ($book['author'] === 'Andy Weir'): ?>
    <li><?= $book['name'] ?> (<?= $book['releaseYear'] ?>)</li>
  <?php endif; ?>
<?php endforeach; ?>
```

4. Creating a Function to Filter:

```php
function filterByAuthor($books, $author) {
    $filteredBooks = [];
    foreach ($books as $book) {
        if ($book['author'] === $author) {
            $filteredBooks[] = $book;
        }
    }
    return $filteredBooks;
}
```

5. Using the Function:

```php
$weirBooks = filterByAuthor($books, 'Andy Weir');
foreach ($weirBooks as $book) {
    echo $book['name'];
}
```

6. Best Practices:

- Use === for comparison.

- Always return values in functions.

- Name keys in camelCase (e.g., releaseYear, purchaseUrl).

7. Homework Exercise:

- Create a filterByReleaseYear function.

- Display books released after a specific year.