

LAPORAN TUGAS PEMROGRAMAN WEB

TUGAS KEDUA—*Praktikum Modul Kedua: PHP*



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PROGRAM STUDI S. Tr. TEKNIK INFORMATIKA

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BAB I

PERCOBAAN

1.1. Percobaan Pertama—Form Handling & Validation

1.1.1. *Source Code:*

```
<?php
$namaErr = $emailErr = $linkErr = "";
$nama = $email = $link = "";

if ($_SERVER["REQUEST_METHOD"] == "POST") {

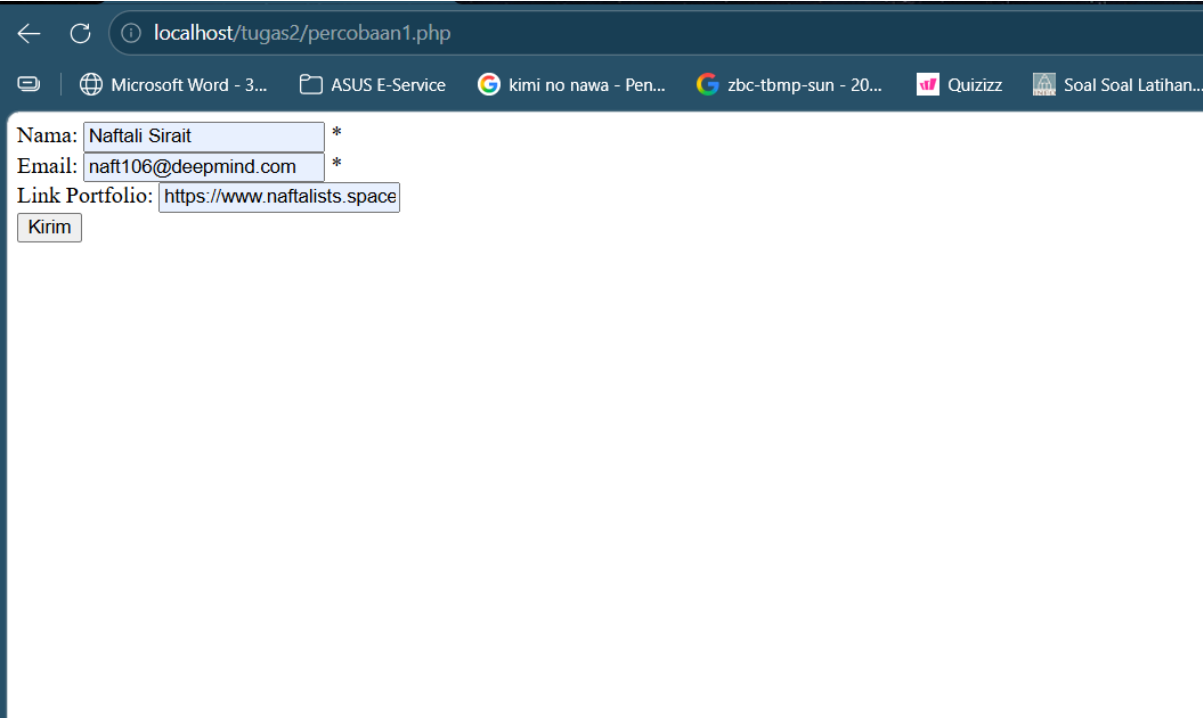
    if (empty($_POST["nama"])) {
        $namaErr = "Nama tidak boleh kosong";
    } else {
        $nama = htmlspecialchars($_POST["nama"]);
    }

    if (!filter_var($_POST["email"], FILTER_VALIDATE_EMAIL)) {
        $emailErr = "Email tidak valid";
    } else {
        $email = $_POST["email"];
    }

    if (!preg_match("/\b(?:https?|ftp):\/\/[a-z0-9+&@#\/%?~_!:\.,;]*[a-z0-9+&@#\/%~_!]/i",
$_POST["link"])) {
        $linkErr = "Link tidak valid";
    } else {
        $link = $_POST["link"];
    }
}
?>

<form method="post" action="<?php echo $_SERVER['PHP_SELF'];?>">
Nama: <input type="text" name="nama"> <span>* <?php echo $namaErr;?></span><br>
Email: <input type="text" name="email"> <span>* <?php echo $emailErr;?></span><br>
Link Portfolio: <input type="text" name="link"> <span><?php echo $linkErr;?></span><br>
<input type="submit" value="Kirim">
</form>
```

1.1.2. Output:



The screenshot shows a web browser window with the address bar displaying 'localhost/tugas2/percobaan1.php'. The browser's taskbar includes several open applications: Microsoft Word, ASUS E-Service, a browser window titled 'kimi no nawa - Pen...', another browser window titled 'zbc-tbmp-sun - 20...', Quizizz, and a document titled 'Soal Soal Latihan...'. The main content area of the browser displays a form with the following fields:

- Nama: *
- Email: *
- Link Portfolio:

Below the form fields is a button labeled 'Kirim'.

1.1.3. Penjelasan:

Percobaan ini menunjukkan bagaimana server memproses data dari form dan memastikan input tidak asal masuk. Script mengecek apakah request datang lewat metode POST, lalu memvalidasi setiap field: nama dicek kosong atau tidak, email diverifikasi dengan `filter_var()` agar sesuai format standar, dan URL diuji pakai regex untuk memastikan bentuknya benar. Fungsi `htmlspecialchars()` dipakai untuk menghindari XSS (Cross-Site Scripting), yaitu serangan di mana user menyisipkan script berbahaya ke dalam input.

1.2. Percobaan Kedua—Date, Time, and Include

1.2.1. *Source Code:*

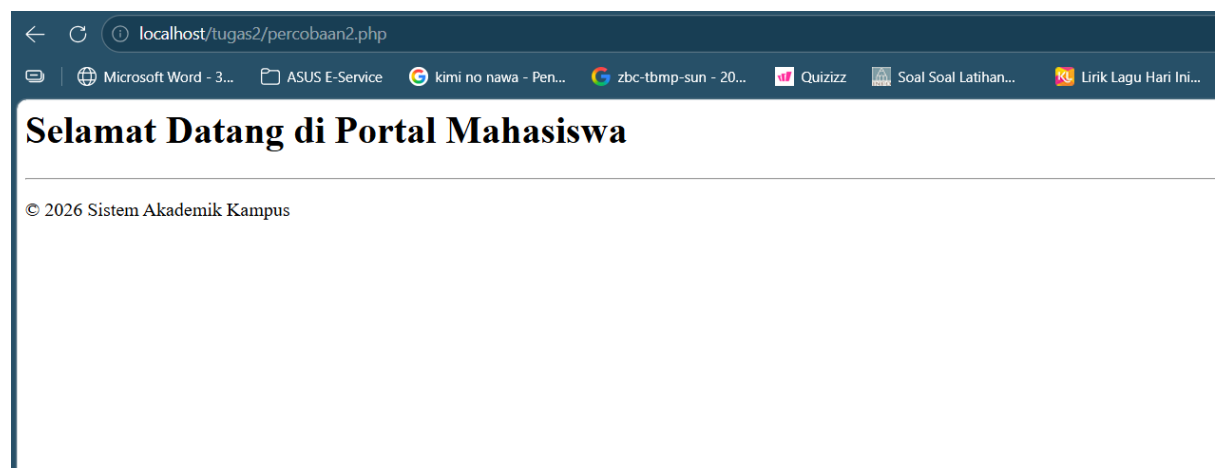
INDEX:

```
<?php  
echo "<h1>Selamat Datang di Portal Mahasiswa</h1>";  
include 'percobaan2_footer.php';  
?>
```

FOOTER:

```
<?php  
echo "<hr>";  
echo "<p>&copy; " . date("Y") . " Sistem Akademik Kampus</p>";  
?>
```

1.2.2. *Output:*



1.2.3. *Penjelasan:*

Fungsi `date("Y")` mengambil tahun saat ini dari server, jadi konten selalu update tanpa perlu diubah manual. Sementara `include` memungkinkan untuk memecah kode jadi beberapa file agar lebih rapi dan reusable—misalnya footer yang sama dipakai di banyak halaman. Bedanya dengan `require`, `include` tidak menghentikan program kalau file tidak ditemukan.

1.3. Percobaan Ketiga—File Handling

1.3.1. *Source Code:*

```
<?php
$fileLog = fopen("aktivitas.txt", "a") or die("File gagal dibuka!");
$isi = "Akses pada jam: " . date("H:i:s") . "\n";
fwrite($fileLog, $isi);
fclose($fileLog);
$baca = fopen("aktivitas.txt", "r");
echo fread($baca, filesize("aktivitas.txt"));
fclose($baca);
?>
```

1.3.2. *Output:*



1.3.3. Penjelasan:

Percobaan ini memperlihatkan bagaimana PHP berinteraksi langsung dengan file di server. `fopen()` membuka file dengan mode tertentu (append untuk menambah isi, read untuk membaca), lalu `fwrite()` mencatat aktivitas (semacam log sederhana), dan `fread()` menampilkan isi file tersebut. Ini konsep dasar logging—sesuatu yang kelihatannya sepele tapi krusial di sistem nyata untuk debugging dan audit.

1.4. Percobaan Keempat—Sessions and Cookies

1.4.1. *Source Code:*

```
<?php
session_start();

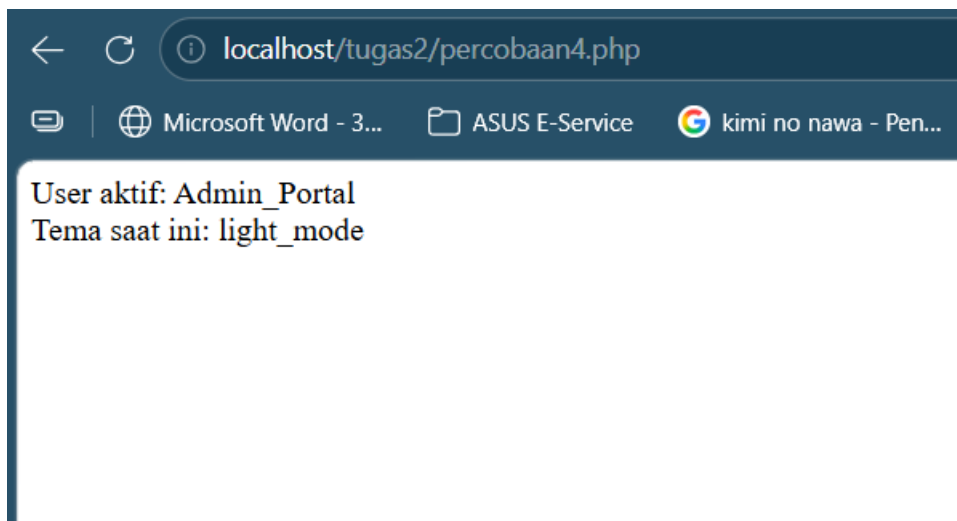
setcookie("tema_user", "light_mode", time() + 3600, "/");

$_SESSION["user_login"] = "Admin_Portal";

echo "User aktif: " . $_SESSION["user_login"] . "<br>";

if (isset($_COOKIE["tema_user"])) {
    echo "Tema saat ini: " . $_COOKIE["tema_user"];
}
?>
```

1.4.2. *Output:*



1.4.3. Penjelasan:

`setcookie()` menyimpan preferensi user di browser (misalnya tema), sedangkan `$_SESSION` menyimpan data di server selama sesi aktif (misalnya status login). `session_start()` wajib dipanggil dulu karena tanpa itu PHP tidak tahu sesi mana yang sedang digunakan. Konsep ini inti dari autentikasi—tanpa session, setiap request itu “amnesia”, tidak tahu siapa user-nya.

1.5. Percobaan Kelima—PHP JSON and Filters

1.5.1. *Source Code:*

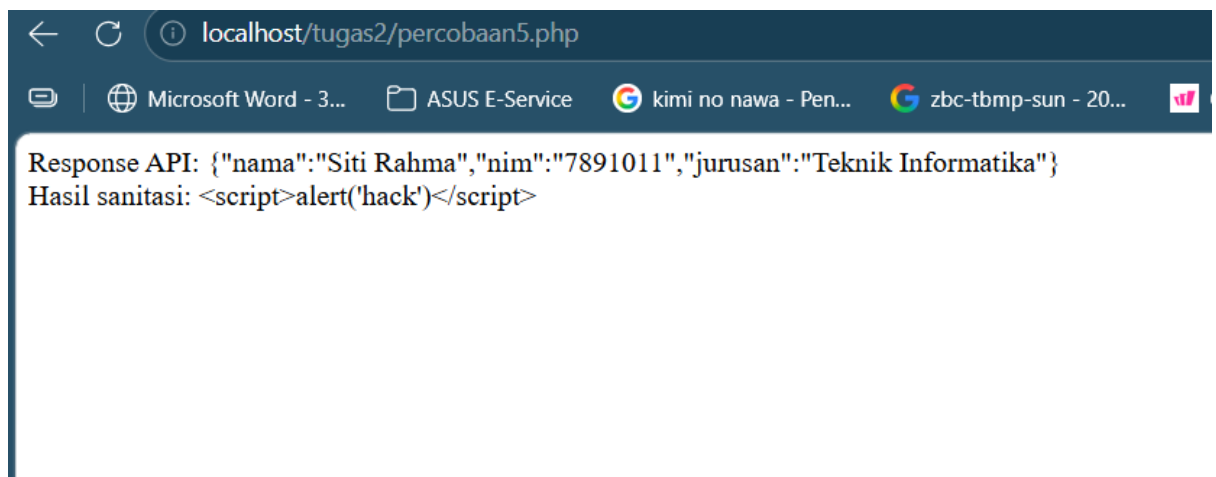
```
<?php
$mahasiswa = [
    "nama" => "Siti Rahma",
    "nim" => "7891011",
    "jurusan" => "Teknik Informatika"
];

$json = json_encode($mahasiswa);
echo "Response API: " . $json . "<br>";

$input = "<script>alert('hack')</script>";
$bersih = htmlspecialchars($input, ENT_QUOTES, 'UTF-8');

echo "Hasil sanitasi: " . $bersih;
?>
```

1.5.2. *Output:*



1.5.3. Penjelasan:

Percobaan ini mengarah ke dunia API dan keamanan input.

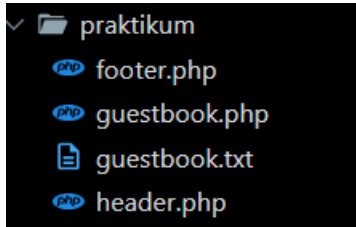
`json_encode()` mengubah array PHP menjadi format JSON, yang merupakan standar komunikasi antar sistem (frontend-backend, atau antar server). Sementara `filter_var()` dengan `FILTER_SANITIZE_STRING` digunakan untuk membersihkan input dari tag HTML berbahaya.

BAB II

TUGAS PRAKTIKUM

2.1. Aplikasi Guest Book Sederhana

2.1.1. *Source Code:*



←header.php: →

```
<!DOCTYPE html>
```

```
<html lang="id">
```

```
<head>
```

```
<meta charset="UTF-8">
```

```
<meta name="viewport" content="width=device-width, initial-scale=1.0">
```

```
<title>GuestBook</title>
```

```
<link rel="preconnect" href="https://fonts.googleapis.com">
```

```
<link
```

```
href="https://fonts.googleapis.com/css2?family=Playfair+Display:ital,wght@0,400;0,600;0,700;1,400&family=Cormorant+Garamond:wght@300;400;500&family=Crimson+Text:ital,wght@0,400;0,600;1,400&display=swap"
```

```
rel="stylesheet">
```

```
<style>
```

```
:root {
```

```
--navy-deep: #060e1f;
```

```
--navy: #0d1f3c;
```

```
--navy-mid: #142850;
```

```
--navy-light: #1e3a6e;
```

```
--gold-bright: #f0c040;
```

```
--gold: #c9922a;
```

```
--gold-muted: #9e7420;
```

```
--gold-pale: #f5e2a3;
```

```
--white: #f8f5ee;
```

```
--white-dim: rgba(248,245,238,0.75);
```

```
--white-faint: rgba(248,245,238,0.12);
```

```
--border-gold: rgba(201,146,42,0.35);
```

```
}
```

```
*, ::before, ::after { box-sizing: border-box; margin: 0; padding: 0; }
```

```
html { scroll-behavior: smooth; }
```

```
body {
```

```
background-color: var(--navy-deep);
```

```
background-image:
```

```
radial-gradient(ellipse 80% 50% at 50% -10%, rgba(201,146,42,0.07) 0%, transparent 70%),
```

```
repeating-linear-gradient(0deg, transparent, transparent 79px, rgba(201,146,42,0.025) 79px,
```

```
rgba(201,146,42,0.025) 80px),
```

```

    repeating-linear-gradient(90deg, transparent, transparent 79px, rgba(201,146,42,0.025) 79px,
    rgba(201,146,42,0.025) 80px);
    color: var(--white);
    font-family: 'Crimson Text', Georgia, serif;
    font-size: 17px;
    line-height: 1.65;
    min-height: 100vh;
}
/* Header */
.site-header {
    position: relative;
    text-align: center;
    padding: 56px 20px 48px;
    overflow: hidden;
}
.site-header::before {
    content: "";
    position: absolute;
    inset: 0;
    background: linear-gradient(180deg, rgba(201,146,42,0.06) 0%, transparent 100%);
    pointer-events: none;
}
.header-ornament {
    display: flex;
    align-items: center;
    justify-content: center;
    gap: 14px;
    margin-bottom: 20px;
    opacity: 0;
    animation: fadeDown 0.8s ease forwards 0.1s;
}
.orn-line {
    flex: 1; max-width: 120px; height: 1px;
    background: linear-gradient(90deg, transparent, var(--gold), transparent);
}
.orn-dia { width: 10px; height: 10px; background: var(--gold); transform: rotate(45deg); flex-shrink: 0; }
.orn-dia-s { width: 5px; height: 5px; background: var(--gold-muted); transform: rotate(45deg); flex-shrink: 0; }
.site-header h1 {
    font-family: 'Playfair Display', serif;
    font-size: clamp(2.2rem, 5vw, 3.6rem);
    font-weight: 700;
    letter-spacing: 0.04em;
    color: var(--white);
    line-height: 1.1;
    opacity: 0;
    animation: fadeDown 0.9s ease forwards 0.25s;
}
.site-header h1 em { color: var(--gold-bright); font-style: italic; }
.site-header .subtitle {

```

```

font-family: 'Cormorant Garamond', serif;
font-size: 0.9rem;
font-weight: 300;
letter-spacing: 0.22em;
text-transform: uppercase;
color: var(--gold-muted);
margin-top: 10px;
opacity: 0;
animation: fadeDown 0.9s ease forwards 0.4s;
}
.header-orn-bot { margin-top: 24px; opacity: 0; animation: fadeDown 0.8s ease forwards 0.5s; }

/* Animations */
@keyframes fadeDown { from { opacity:0; transform:translateY(-16px); } to { opacity:1; transform:translateY(0); }}
@keyframes fadeUp { from { opacity:0; transform:translateY(24px); } to { opacity:1; transform:translateY(0); }}
@keyframes fadeIn { from { opacity:0; } to { opacity:1; }}
@keyframes shimmer { 0%{background-position:-200% center;} 100%{background-position:200% center;}}
/* Layout */
.container { max-width: 820px; margin: 0 auto; padding: 0 20px 60px; }
/* Welcome banner */
.welcome-banner {
background: linear-gradient(135deg, var(--navy-light) 0%, var(--navy-mid) 100%);
border: 1px solid var(--gold);
border-radius: 4px;
padding: 16px 24px;
margin-bottom: 32px;
display: flex;
align-items: center;
gap: 14px;
position: relative;
overflow: hidden;
animation: fadeUp 0.6s ease forwards;
}
.welcome-banner::before {
content: "";
position: absolute;
top: 0; left: 0; right: 0; height: 2px;
background: linear-gradient(90deg, transparent, var(--gold-bright), transparent);
}
.welcome-banner .wb-icon { font-size: 1.5rem; flex-shrink: 0; }
.welcome-banner p { font-family: 'Playfair Display', serif; font-size: 1.05rem; color: var(--gold-pale); }
.welcome-banner p strong { color: var(--gold-bright); }

/* Card */
.card {
background: linear-gradient(160deg, rgba(20,40,80,0.9) 0%, rgba(13,31,60,0.95) 100%);
border: 1px solid var(--border-gold);
border-radius: 6px;
padding: 40px 44px;

```

```
position: relative;
overflow: hidden;
opacity: 0;
animation: fadeUp 0.7s ease forwards;
}
.card::before {
content: "";
position: absolute;
top: 0; left: 0; right: 0; height: 2px;
background: linear-gradient(90deg, transparent 0%, var(--gold) 40%, var(--gold-bright) 60%, transparent 100%);
}
.card-title {
font-family: 'Playfair Display', serif;
font-size: 1.4rem;
font-weight: 600;
color: var(--white);
margin-bottom: 28px;
display: flex;
align-items: center;
gap: 12px;
}
.card-title::after {
content: "";
flex: 1; height: 1px;
background: linear-gradient(90deg, var(--border-gold), transparent);
}
/* Form */
.form-group { margin-bottom: 22px; position: relative; }
.form-group label {
display: block;
font-family: 'Cormorant Garamond', serif;
font-size: 0.8rem;
font-weight: 500;
letter-spacing: 0.18em;
text-transform: uppercase;
color: var(--gold-muted);
margin-bottom: 8px;
transition: color 0.2s;
}
.form-group:focus-within label { color: var(--gold-bright); }
.form-group input,
.form-group textarea {
width: 100%;
background: rgba(6,14,31,0.7);
border: 1px solid rgba(201,146,42,0.25);
border-radius: 4px;
padding: 13px 16px;
color: var(--white);
font-family: 'Crimson Text', serif;
```

```

font-size: 1rem;
outline: none;
transition: border-color 0.25s, background 0.25s, box-shadow 0.25s;
-webkit-appearance: none;
}
.form-group input::placeholder,
.form-group textarea::placeholder { color: rgba(248,245,238,0.22); font-style: italic; }
.form-group input:focus,
.form-group textarea:focus {
border-color: var(--gold);
background: rgba(6,14,31,0.9);
box-shadow: 0 0 0 3px rgba(201,146,42,0.1), inset 0 1px 3px rgba(0,0,0,0.3);
}
.form-group input.err, .form-group textarea.err {
border-color: #d95555;
box-shadow: 0 0 0 3px rgba(217,85,85,0.1);
}
.form-group textarea { resize: vertical; min-height: 110px; }
.field-error {
font-family: 'Cormorant Garamond', serif;
font-size: 0.88rem;
color: #f07070;
margin-top: 6px;
display: flex;
align-items: center;
gap: 6px;
animation: fadeUp 0.3s ease;
}
.field-error::before { content: ' ⚠️ '; font-size: 0.78rem; }
/* Button */
.btn-submit {
width: 100%;
margin-top: 10px;
padding: 15px 32px;
background: linear-gradient(135deg, var(--gold-muted) 0%, var(--gold) 50%, var(--gold-muted) 100%);
background-size: 200% auto;
color: var(--navy-deep);
border: none;
border-radius: 4px;
font-family: 'Cormorant Garamond', serif;
font-size: 1rem;
font-weight: 500;
letter-spacing: 0.2em;
text-transform: uppercase;
cursor: pointer;
transition: background-position 0.4s ease, transform 0.15s, box-shadow 0.3s;
position: relative;
overflow: hidden;
}

```

```

.btn-submit:hover {
  background-position: right center;
  transform: translateY(-1px);
  box-shadow: 0 6px 24px rgba(201,146,42,0.3);
}
.btn-submit:active { transform: translateY(0); }
/* Alert */
.alert-success {
  background: linear-gradient(135deg, rgba(20,60,40,0.8), rgba(10,40,25,0.9));
  border: 1px solid rgba(80,200,120,0.4);
  border-radius: 4px;
  padding: 14px 20px;
  margin-bottom: 24px;
  color: #90e0a8;
  font-family: 'Crimson Text', serif;
  font-size: 1rem;
  display: flex;
  align-items: center;
  gap: 10px;
  animation: fadeUp 0.5s ease;
}
.alert-success::before { content: '✓'; font-weight: bold; }
/* Divider */
.section-divider {
  display: flex;
  align-items: center;
  gap: 18px;
  margin: 44px 0 36px;
  opacity: 0;
  animation: fadeIn 0.8s ease forwards 0.6s;
}
.section-divider .deco-line { flex:1; height:1px; background:linear-gradient(90deg,transparent,var(--border-gold),transparent); }
.section-divider .deco-label { font-family:'Cormorant Garamond',serif; font-size:0.75rem; letter-spacing:0.28em; text-
transform:uppercase; color:var(--gold-muted); white-space:nowrap; }
/* Guest list */
.guest-count { font-family:'Cormorant Garamond',serif; font-size:0.8rem; letter-spacing:0.15em; text-
transform:uppercase; color:var(--gold-muted); margin-bottom:20px; }
.guest-count span { color:var(--gold-bright); font-weight:500; }
.guest-list { display:flex; flex-direction:column; gap:16px; }
.guest-card {
  background: rgba(14,28,58,0.7);
  border: 1px solid rgba(201,146,42,0.13);
  border-left: 3px solid var(--gold-muted);
  border-radius: 4px;
  padding: 20px 24px;
  position: relative;
  transition: border-left-color 0.3s, background 0.3s, transform 0.22s;
  opacity: 0;
}

```

```

    animation: fadeUp 0.5s ease forwards;
  }
  .guest-card:hover { background:rgba(20,40,80,0.8); border-left-color:var(--gold-bright); transform:translateX(4px); }
  .gc-header { display:flex; align-items:baseline; justify-content:space-between; gap:12px; margin-bottom:8px; flex-wrap:wrap; }
  .gc-name { font-family:'Playfair Display',serif; font-size:1.05rem; font-weight:600; color:var(--gold-pale); }
  .gc-meta { font-family:'Cormorant Garamond',serif; font-size:0.82rem; color:rgba(248,245,238,0.38); letter-spacing:0.05em; }
  .gc-msg { font-family:'Crimson Text',serif; font-size:0.98rem; color:var(--white-dim); line-height:1.55; font-style:italic; }
  .gc-num { position:absolute; top:16px; right:18px; font-family:'Cormorant Garamond',serif; font-size:1.9rem; color:rgba(201,146,42,0.08); font-weight:300; line-height:1; pointer-events:none; }
  .no-guests { text-align:center; padding:48px 20px; font-family:'Cormorant Garamond',serif; font-size:1rem; color:rgba(248,245,238,0.28); letter-spacing:0.06em; font-style:italic; }

/* JSON output box */
.json-box {
  background: rgba(6,14,31,0.85);
  border: 1px solid rgba(201,146,42,0.2);
  border-radius: 4px;
  padding: 16px 20px;
  font-family: 'Courier New', monospace;
  font-size: 0.82rem;
  color: var(--gold-pale);
  margin-top: 16px;
  overflow-x: auto;
  white-space: pre-wrap;
  word-break: break-all;
  line-height: 1.6;
}
.json-toggle {
  display: inline-block;
  margin-top: 10px;
  font-family: 'Cormorant Garamond', serif;
  font-size: 0.82rem;
  letter-spacing: 0.1em;
  color: var(--gold-muted);
  text-transform: uppercase;
  cursor: pointer;
  border: none;
  background: none;
  padding: 6px 0;
  transition: color 0.2s;
}
.json-toggle:hover { color: var(--gold-bright); }
.json-toggle::before { content: '{ }'; }
@media(max-width:600px){
  .card{padding:26px 20px;}
  .site-header h1{font-size:2rem;}
}

```



```

    $emailErr = "Format email tidak valid";
} else {
    $email = htmlspecialchars($rawEmail);
}
// Validasi Pesan
if (empty(trim($_POST["pesan"]))) {
    $pesanErr = "Pesan tidak boleh kosong";
} else {
    $pesan = htmlspecialchars(trim($_POST["pesan"]));
}
// Simpan ke file jika semua valid
if (empty($nameErr) && empty($emailErr) && empty($pesanErr)) {
    // Percobaan 5: json_encode — setiap entri disimpan sebagai satu baris JSON
    $newEntry = [
        "nama" => $name,
        "email" => $email,
        "pesan" => $pesan,
        "waktu" => date("d M Y, H:i")
    ];
    $jsonLine = json_encode($newEntry, JSON_UNESCAPED_UNICODE) . "\n";
    // Percobaan 3: fopen "a" (append) + fwrite + fclose
    $file = fopen("guestbook.txt", "a") or die("Gagal membuka file!");
    fwrite($file, $jsonLine);
    fclose($file);
    // Session — instruksi no. 4
    $_SESSION["last_visitor"] = $name;
    $successMsg = "Terima kasih, <strong>" . $name . "</strong>! Pesan Anda telah dicatat.";
    $name = $email = $pesan = "";
}
}
// Baca semua entri — Percobaan 3: fopen "r" + fread + fclose
$guests = [];
if (file_exists("guestbook.txt") && filesize("guestbook.txt") > 0) {
    $readFile = fopen("guestbook.txt", "r");
    $raw = fread($readFile, filesize("guestbook.txt"));
    fclose($readFile);
    $lines = array_filter(explode("\n", trim($raw)));
    foreach ($lines as $line) {
        $decoded = json_decode(trim($line), true);
        if ($decoded) $guests[] = $decoded;
    }
    $guests = array_reverse($guests);
}

// Include header — Percobaan 2
include 'header.php';
?>
<?php if (isset($_SESSION["last_visitor"])): ?>
<div class="welcome-banner">

```

```

<span class="wb-icon">&#10022;</span>
<p>Selamat Datang Kembali, <strong><?php echo htmlspecialchars($_SESSION["last_visitor"]); ?></strong>
&mdash; senang melihat Anda kembali!</p>
</div>
<?php endif; ?>
<div class="card" style="animation-delay:0.15s;">
<h2 class="card-title">Tulis Pesan</h2>
<?php if ($successMsg): ?>
  <div class="alert-success"><?php echo $successMsg; ?></div>
<?php endif; ?>
<form method="post" action="<?php echo htmlspecialchars($_SERVER['PHP_SELF']); ?>" novalidate>
  <div class="form-group">
    <label for="name">Nama Lengkap</label>
    <input type="text" id="name" name="name"
      placeholder="Masukkan nama Anda..."
      value="<?php echo htmlspecialchars($name); ?>"
      <?php if ($nameErr) echo 'class="err"'; ?>>
    <?php if ($nameErr): ?><span class="field-error"><?php echo $nameErr; ?></span><?php endif; ?>
  </div>
  <div class="form-group">
    <label for="email">Alamat Email</label>
    <input type="text" id="email" name="email"
      placeholder="nama@contoh.com"
      value="<?php echo htmlspecialchars($email); ?>"
      <?php if ($emailErr) echo 'class="err"'; ?>>
    <?php if ($emailErr): ?><span class="field-error"><?php echo $emailErr; ?></span><?php endif; ?>
  </div>
  <div class="form-group">
    <label for="pesan">Pesan</label>
    <textarea id="pesan" name="pesan"
      placeholder="Tuliskan pesan atau komentar Anda di sini..."
      <?php if ($pesanErr) echo 'class="err"'; ?>><?php echo htmlspecialchars($pesan); ?></textarea>
    <?php if ($pesanErr): ?><span class="field-error"><?php echo $pesanErr; ?></span><?php endif; ?>
  </div>

  <button type="submit" class="btn-submit">Kirim Pesan</button>
</form>
</div>
<?php if ($newEntry): ?>
<div class="card" style="margin-top:20px;animation-delay:0.3s;">
<h2 class="card-title" style="font-size:1.1rem;">Preview JSON &mdash; Percobaan 5</h2>
<p style="font-family:'Cormorant Garamond',serif;font-size:0.88rem;color:rgba(248,245,238,0.45);margin-bottom:6px;">
  Output <code style="color:var(--gold-muted);background:rgba(0,0,0,0.3);padding:1px 6px;border-radius:3px;">json_encode()</code> dari entri terakhir:
</p>
  <div class="json-box"><?php echo htmlspecialchars(json_encode($newEntry, JSON_UNESCAPED_UNICODE |
JSON_PRETTY_PRINT)); ?></div>
</div>

```

```

<?php endif; ?>
<div class="section-divider">
  <span class="deco-line"></span>
  <span class="deco-label">Daftar Tamu</span>
  <span class="deco-line"></span>
</div>
<div class="card" style="animation-delay:0.3s;">
  <h2 class="card-title">Pesan Tamu</h2>
  <?php if (count($guests) > 0): ?>
    <p class="guest-count">Menampilkan <span><?php echo count($guests); ?></span> entri tamu</p>
    <div class="guest-list">
      <?php foreach ($guests as $i => $g): ?>
        <div class="guest-card">
          <span class="gc-num"><?php echo str_pad(count($guests) - $i, 2, '0', STR_PAD_LEFT); ?></span>
          <div class="gc-header">
            <span class="gc-name"><?php echo htmlspecialchars($g['nama']); ?></span>
            <span class="gc-meta"><?php echo htmlspecialchars($g['email']); ?> &middot; <?php echo
htmlspecialchars($g['waktu']); ?></span>
          </div>
          <p class="gc-msg">&ldquo;<?php echo htmlspecialchars($g['pesan']); ?>&rdquo;</p>
        </div>
      <?php endforeach; ?>
    </div>
    <button class="json-toggle" id="jBtn" onclick="
      var b=document.getElementById('jBox'),lb=document.getElementById('jBtn');
      if(b.style.display==='none'){b.style.display='block';lb.textContent='Sembunyikan Raw JSON';}
      else{b.style.display='none';lb.textContent='Lihat Semua Entri (JSON)'};
    ">Lihat Semua Entri (JSON)</button>
    <div id="jBox" class="json-box" style="display:none;margin-top:10px;"><?php
      echo htmlspecialchars(json_encode(array_reverse($guests), JSON_UNESCAPED_UNICODE | JSON_PRETTY_PRINT));
    ?></div>
  <?php else: ?>
    <p class="no-guests">Belum ada tamu yang mengisi buku tamu ini.<br>Jadilah yang pertama!</p>
  <?php endif; ?>
</div>
<?php include 'footer.php'; ?>

```

← footer.php: →

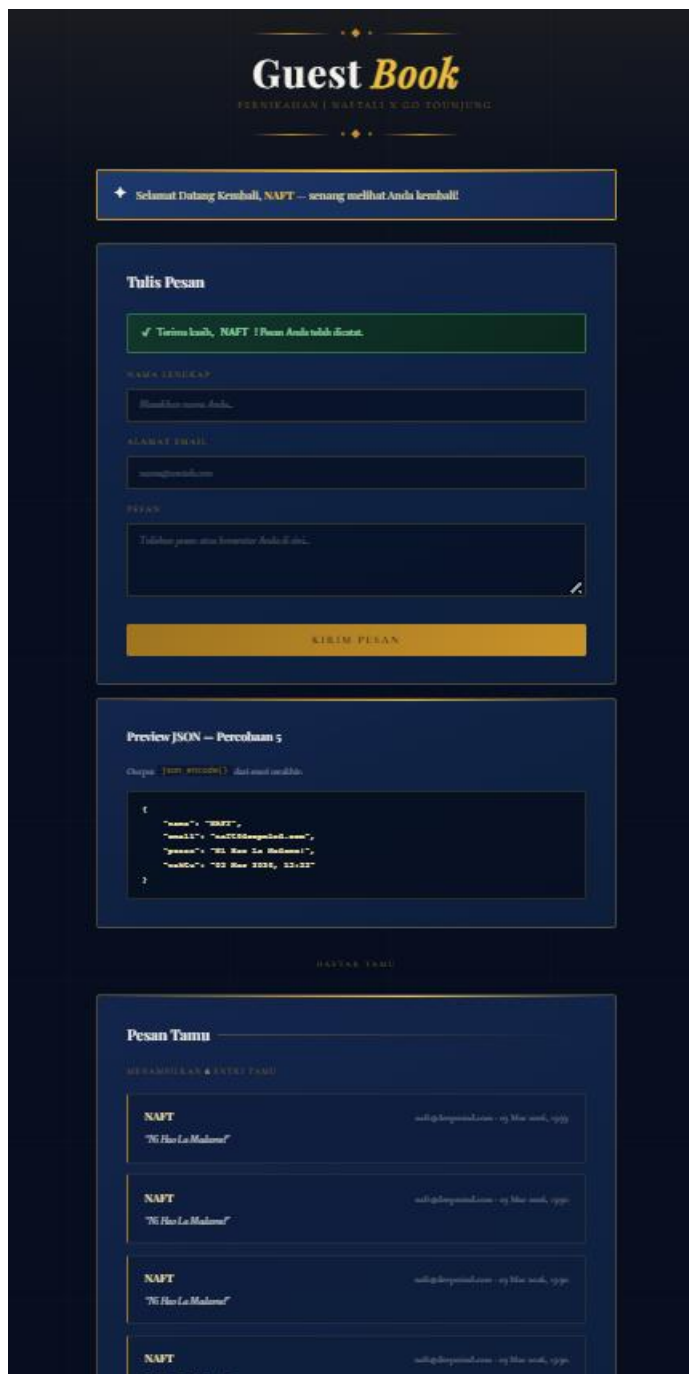
```

</div>
<footer style="border-top:1px solid rgba(201,146,42,0.15);padding:28px 20px;text-align:center;margin-top:20px;">
  <p style="font-family:'Cormorant Garamond',serif;font-size:0.82rem;letter-spacing:0.18em;text-
transform:uppercase;color:rgba(248,245,238,0.3);">
    Copyright &copy; <?php echo date("Y"); ?> &mdash; @naftalists

```

```
</p>
</footer>
<script>
  document.querySelectorAll('.guest-card').forEach(function(c,i){c.style.animationDelay=(0.06*i+0.1)+'s;});
  var btn=document.querySelector('.btn-submit');
  if(btn){btn.addEventListener('click',function(e){var
r=document.createElement('span'),s=Math.max(btn.offsetWidth,btn.offsetHeight);r.style.cssText='position:absolute;border-radius:50%;transform:scale(0);animation:ripA 0.55s linear;background:rgba(255,255,255,0.18);pointer-events:none;width:'+s+'px;height:'+s+'px;left:'+(e.clientX-btn.getBoundingClientRect().left-s/2)+'px;top:'+(e.clientY-btn.getBoundingClientRect().top-s/2)+'px;';btn.appendChild(r);setTimeout(function(){r.remove();},560);});}
</script>
<style>@keyframes ripA{to{transform:scale(2.8);opacity:0;}}</style>
</body></html>
```

Output:



2.1.2. Penjelasan

Aplikasi “Simple File-Based Guestbook” ini bekerja sebagai alur lengkap pengolahan data dari pengguna: form menerima input nama, email, dan pesan melalui metode POST, lalu server memvalidasi agar nama tidak kosong dan email sesuai format menggunakan `filter_var()`, sehingga hanya data yang layak yang diproses lebih lanjut. Data yang lolos validasi kemudian diamankan dengan `htmlspecialchars()` untuk mencegah injeksi berbahaya, disimpan ke file `guestbook.txt` menggunakan mekanisme file handling (`fopen`, `fwrite`, `fclose`) sebagai log sederhana, dan nama pengguna disimpan dalam `$_SESSION` agar sistem bisa mengenali bahwa user baru saja mengisi form dan menampilkan pesan personal “Selamat Datang Kembali”. Setelah itu, aplikasi membaca kembali isi file tersebut (`fread`) dan menampilkannya di halaman sebagai daftar tamu, sementara penggunaan `include` pada header dan footer menjaga struktur kode tetap modular dan rapi, sehingga seluruh proses mencerminkan siklus dasar aplikasi web: menerima input, memvalidasi, menyimpan, mengelola state, dan menampilkan kembali data.

DOKUMENTASI

naftali.it.student.pens.ac.id