

LAMPIRAN

Lampiran 1 Surat Kesiediaan Membimbing TA Pembimbing I

SURAT KESEDIAAN MEMBIMBING TA

Yang bertanda tangan dibawah ini

Nama : Eko Budihartono, S.T., M.Kom.
NIDN : 0605037304
NIPY : 12.013.170
Jabatan Struktural : Sub Pelatihan dan Sertifikasi
Fungsional : Lektor

Dengan ini menyatakan bersedia untuk menjadi pembimbing II pada Tugas Akhir mahasiswa berikut:

Nama : Aufa Nawal Kumara Adi
NIM : 22041077
Program Studi : Diploma III Teknik Komputer

Judul TA : MONITORING ALAT PENYIRAMAN DAN
PEMBERIAN NUTRISI OTOMATIS PADA TANAMAN
MELATI BERBASIS INTERNET OF THINGS

Dengan ini menyatakan agar dilaksanakan sebagaimana mestinya.

Tegal, 3 Maret 2025

Mengetahui,
Ka Prodi DIII Teknik Komputer



Ida Afrilliana, S.T., M.Kom.
NIPY. 12.013.168

Dosen Pembimbing II

Eko Budihartono, S.T., M.Kom.
NIPY. 12.013.170

Lampiran 2 Surat Kesiediaan Membimbing TA Pembimbing II

SURAT KESEDIAAN MEMBIMBING TA

Yang bertanda tangan dibawah ini

Nama : Arfan Haqiqi Sulasmoro, M.Kom.
NIDN : 0623037704
NIPY : 02.009.054
Jabatan Struktural : -
Jabatan Fungsional : Lektor

Dengan ini menyatakan bersedia untuk menjadi pembimbing II pada Tugas Akhir mahasiswa berikut:

Nama : Afa Nawal Kumara Adi
NIM : 22041077
Program Studi : Diploma III Teknik Komputer

Judul TA : MONITORING ALAT PENYIRAMAN DAN
PEMBERIAN NUTRISI OTOMATIS PADA TANAMAN
MELATI BERBASIS INTERNET OF THINGS

Dengan ini menyatakan agar dilaksanakan sebagaimana mestinya.

Tegal, 3 Maret 2025

Mengetahui,
Ka Prodi DIII Teknik Komputer



Ida Afriliana, S.T., M.Kom.
NIPY. 12.013.168

Dosen Pembimbing II

Arfan Haqiqi Sulasmoro, M.Kom.
NIPY. 02.009.054

Lampiran 3 Surat Izin Observasi



POLITEKNIK HARAPAN BERSAMA
The True Education Campus

D-3 Teknik Komputer

Nomor : 245.03/KOM-PHB/III/2025
Lampiran : -
Perihal : Permohonan Izin Observasi Tugas Akhir (TA)

Kepada Yth.

Pimpinan CV. Harum Melati Jaya

Di Desa Maribaya Kec. Tarub Kab. Tegal

Dengan Hormat,

Sehubungan dengan tugas mata kuliah Tugas Akhir (TA) yang akan diselenggarakan di semester V Program Studi Diploma III Teknik Komputer Politeknik Harapan Bersama Tegal, Maka dengan ini kami mengajukan izin observasi pengambilan data di CV. Harum Melati Jaya yang Bapak / Ibu Pimpinan, untuk kepentingan dalam pembuatan produk Tugas Akhir, dengan Mahasiswa sebagai berikut:

No	NIM	NAMA	NO HP
1	22041061	NUR WAHIDA SETIAWATI	081225098092
2	22041077	AUFA NAWAL KUMARA ADI	088226368581

Demikian surat permohonan ini kami sampaikan atas izin dan kerjasamanya kami sampaikan terima kasih.

Tegal, 25 April 2025
Ka. Prodi DIII Teknik Komputer
Politeknik Harapan Bersama Tegal



Ida Afrilliana, ST, M.Kom
NIP. 12.013.168

Lampiran 4 Dokumentasi Observasi



Lampiran 5 Source code website

```
<!DOCTYPE html>
<html lang="en">

<head>
    <meta charset="utf-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width,
initialscale=1, shrink-to-fit=no">
    <meta name="description" content="">
    <meta name="author" content="">
    <title>Smart Melati| <?= $judul; ?></title>
    <!-- Custom fonts for this template-->
    <link href="<?= base_url('assets/');
?>vendor/fontawesomefree/css/all.min.css" rel="stylesheet"
type="text/css">
    <link
href="https://fonts.googleapis.com/css?family=Nunito:200,200i,300,
300i,400,400i,600,600i,700,700i,800,800i,900,900i"
rel="stylesheet">
    <!-- Custom styles for this template-->
    <link href="<?= base_url('assets/'); ?>css/sb-admin-2.min.css"
rel="stylesheet">
</head>

<body class="bg-gradient-primary">

<!-- Bootstrap core JavaScript-->
<script src="<?=
base_url('assets/vendor/jquery/jquery.min.js'); ?>"></script>
<script src="<?=
base_url('assets/vendor/bootstrap/js/bootstrap.bundle.min.js'); ?>"
></script>
<!-- Core plugin JavaScript-->
<script src="<?=
base_url('assets/vendor/jquery.easing/jquery.easing.min.js');
?>"></script>
<!-- Custom scripts for all pages-->
<script src="<?= base_url('assets/js/sb-admin2.min.js');
?>"></script>
<script>
$('.alert-message').alert().delay(3000).slideUp('slow');
</script>
</body>

</html>

<!-- Footer -->
<footer class="sticky-footer bg-white">
    <div class="container my-auto">
        <div class="copyright text-center my-auto">
            <span>Copyright &copy; Smart melati X Politeknik
Harapan Bersama <?= date('Y'); ?></span>
        </div>
    </div>
```

```

</footer>
<!-- End of Footer -->
</div>
<!-- End of Content Wrapper -->
</div>
<!-- End of Page Wrapper -->
<!-- Scroll to Top Button-->
<a class="scroll-to-top rounded" href="#page-top">
    <i class="fas fa-angle-up"></i>
</a>
<!-- Logout Modal-->
<div class="modal fade" id="logoutModal" tabindex="-1"
role="dialog" aria-labelledby="exampleModalLabel"
    aria-hidden="true">
    <div class="modal-dialog" role="document">
        <div class="modal-content">
            <div class="modal-header">
                <h5 class="modal-title"
id="exampleModalLabel">Yakin
                mau keluar?</h5>
                <button class="close" type="button" data-
dismiss="modal" aria-label="Close">
                    <span aria-hidden="true">x</span>
                </button>
            </div>
            <div class="modal-body">Pilih "Logout" di bawah jika
                kamu yakin sudah selesai.</div>
            <div class="modal-footer">
                <button class="btn btn-secondary" type="button"
data-dismiss="modal">Cancel</button>
                <a class="btn btn-primary" href="{?=
base_url('Autentifikasi/logout'); ?}">Logout</a>
            </div>
        </div>
    </div>
</div>
<!-- Bootstrap core JavaScript-->
<script src="{?=
base_url('assets/vendor/jquery/jquery.min.js'); ?}"></script>
<script src="{?=
base_url('assets/vendor/bootstrap/js/bootstrap.bundle.min.js'); ?}"
></script>
<!-- Core plugin JavaScript-->
<script src="{?=
base_url('assets/vendor/jquery.easing/jquery.easing.min.js');
?}"></script>
<!-- Custom scripts for all pages-->
<script src="{?= base_url('assets/js/sb-admin2.min.js');
?}"></script>
<script src="https://code.jquery.com/jquery-
3.6.0.min.js"></script>
<script
src="https://stackpath.bootstrapcdn.com/bootstrap/4.5.2/js/bootstr
ap.bundle.min.js"></script>

<script>

```

```

        $(' .custom-file-input').on('change', function() {
            let fileName = $(this).val().split('\\').pop();
            $(this).next(' .custom-file-label').addClass("selected").html(fileName);
        });
        $(document).ready(function() {
            $('#table-datatable').dataTable();
        });
        $(' .alert-message').alert().delay(3500).slideUp('slow');
</script>
</body>
</html>

<!DOCTYPE html>
<html lang="en">

<head>
    <meta charset="utf-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width,
initialscale=1, shrink-to-fit=no">
    <meta name="description" content="">
    <meta name="author" content="">
    <title>Samrt melati <?= $judul; ?></title>
    <!-- Custom fonts for this template-->
    <link href="https://cdnjs.cloudflare.com/ajax/libs/font-
awesome/5.15.4/css/all.min.css" rel="stylesheet">
    <link href="<?=
base_url('assets/vendor/fontawesomefree/css/all.min.css'); ?>"
rel="stylesheet" type="text/css">
    <link href="<?=
base_url('assets/vendor/datatables/dataTables.bootstrap4.css');
?>" rel="stylesheet" type="text/css">
    <script type="text/javascript" src="<?=
base_url('assets/vendor/datatables/jquery.dataTables.js');
?>"></script>
    <!-- <script type="text/javascript" src="<?=
base_url('assets/datatables/datatables.js'); ?>"></script> -->
    <link
href="https://fonts.googleapis.com/css?family=Nunito:200,200i,300,
300i,400,400i,600,600i,700,700i,800,800i,900,900i"
rel="stylesheet">
    <!-- Custom styles for this template-->
    <link href="<?= base_url('assets/css/sb-admin-2.min.css'); ?>"
rel="stylesheet">

</head>

<body id="page-top">
    <!-- Page Wrapper -->
    <div id="wrapper">

    <ul class="navbar-nav bg-success sidebar sidebar-dark accordion"
id="accordionSidebar">

        <!-- Sidebar Brand (Logo + Nama) -->

```



```

        <a class="sidebar-brand d-flex align-items-center justify-content-center" href="{?= base_url('dashboard'); ?}">
            <div class="sidebar-brand-icon">
                
            </div>
            <div class="sidebar-brand-text mx-3">Smart Melati</div>
        </a>

        <hr class="sidebar-divider">

        <!-- Master Data -->
        <div class="sidebar-heading">Master Data</div>

        <li class="nav-item">

        <li class="nav-item">
            <a class="nav-link" href="{?= base_url('Dashboard'); ?}">
                <i class="fas fa-tachometer-alt"></i>
                <span>Dashboard</span>
            </a>
        </li>

        <li class="nav-item">
            <a class="nav-link collapsed" href="#" data-toggle="collapse" data-target="#collapsePenyiraman" aria-expanded="true" aria-controls="collapsePenyiraman">
                <i class="fas fa-water"></i>
                <span>Penyiraman</span>
            </a>
            <div id="collapsePenyiraman" class="collapse" data-parent="#accordionSidebar">
                <div class="bg-white py-2 collapse-inner rounded">
                    <h6 class="collapse-header">Menu Penyiraman:</h6>
                    <a class="collapse-item" href="{?= base_url('Log_penyiraman'); ?}">Log Aktivitas Penyiraman</a>
                    <a class="collapse-item" href="{?= base_url('Kontrol_penyiraman'); ?}">Kontrol Penyiraman</a>
                </div>
            </div>

        <li class="nav-item">
            <a class="nav-link collapsed" href="#" data-toggle="collapse" data-target="#collapsePenutrisian" aria-expanded="true" aria-controls="collapsePenutrisian">
                <i class="fas fa-vial"></i>
                <span>Penutrisian</span>
            </a>
            <div id="collapsePenutrisian" class="collapse" aria-labelledby="headingPenutrisian" data-parent="#accordionSidebar">
                <div class="bg-white py-2 collapse-inner rounded">
                    <a class="collapse-item" href="{?= base_url('Penutrisian'); ?}">Kontrol Penutrisian</a>
                    <a class="collapse-item" href="{?= base_url('log_penutrisian'); ?}">Log aktivitas Penutrisian</a>
                </div>
            </div>

```

```

        </div>
    </div>
</li>

<!-- Divider -->
<hr class="sidebar-divider mt-3">

<!-- Sidebar Toggler (Sidebar) -->
<div class="text-center d-none d-md-inline">
    <button class="rounded-circle border-0"
id="sidebarToggle"></button>
</div>

</ul>
<!-- End of Sidebar --    >

<!-- Content Wrapper -->
<div id="content-wrapper" class="d-flex flex-column">
    <!-- Main Content -->
    <div id="content">
        <!-- Topbar -->
        <nav class="navbar navbar-expand navbar-light bg-white
topbar mb-4 static-top shadow">
            <!-- Sidebar Toggle (Topbar) -->
            <button id="sidebarToggleTop" class="btn btn-link d-
mdnone rounded-circle mr-3">
                <i class="fa fa-bars"></i>
            </button>
            <!-- Page Heading -->
            <h1 class="h3 mb-2 text-gray-800"><?= $title; ?></h1>
            <!-- Topbar Navbar -->
            <ul class="navbar-nav ml-auto">
                <div class="topbar-divider d-none d-sm-
block"></div>
                <!-- Nav Item - User Information -->
                <li class="nav-item dropdown no-arrow">
                    <a class="nav-link dropdown-toggle" href="#"
id="userDropdown" role="button" data-toggle="dropdown"
aria-haspopup="true" aria-expanded="false">

                        </a>
                        <!-- Dropdown - User Information -->
                        <div class="dropdown-menu dropdown-menu-right
shadow animated--grow-in" aria-labelledby="userDropdown">
                            <a class="dropdown-item" href="<?=
base_url('user'); ?>">
                                <i class="fas fa-user fa-sm fa-fw mr-2
text-gray-400"></i>
                                Profile Saya
                            </a>
                        <div class="dropdown-divider"></div>

```

```

                <a class="dropdown-item" href="<?=
base_url('autentifikasi/logout'); ?>" data-toggle="modal" data-
target="#logoutModal">
                    <i class="fas fa-sign-out-alt fa-sm
fafw mr-2 text-gray-400"></i>
                        Logout
                    </a>
                </div>
            </li>
        </ul>
    </nav>
    <!-- End of Topbar -->

<!-- Content Wrapper -->
<div id="content-wrapper" class="d-flex flex-column">
    <!-- Main Content -->
    <div id="content">
        <!-- Topbar -->
        <nav class="navbar navbar-expand navbar-light bg-white
topbar mb-4 static-top shadow">
            <!-- Sidebar Toggle (Topbar) -->
            <button id="sidebarToggleTop" class="btn btn-link d-
mdnone rounded-circle mr-3">
                <i class="fa fa-bars"></i>
            </button>
            <!-- Page Heading -->
            <h1 class="h3 mb-2 text-gray-800"><?= $judul; ?></h1>
            <!-- Topbar Navbar -->
            <ul class="navbar-nav ml-auto">
                <div class="topbar-divider d-none d-sm-
block"></div>
                <!-- Nav Item - User Information -->
                <li class="nav-item dropdown no-arrow">
                    <a class="nav-link dropdown-toggle" href="#"
id="userDropdown" role="button" data-toggle="dropdown" aria-
haspopup="true" aria-expanded="false">
                        <?php if (!empty($User)) : ?>
                            <span class="mr-2 d-none d-lg-inline
text-gray-600 small"><?= $User['nama']; ?></span>
                            
                                <?php else: ?>
                                    <span class="mr-2 d-none d-lg-inline
text-gray-600 small">Anomali</span>
                                <?php endif; ?>
                            </a>
                            <!-- Dropdown - User Information -->
                            <div class="dropdown-menu dropdown-menu-right
shadow animated--grow-in" aria-labelledby="userDropdown">
                                <a class="dropdown-item" href="<?=
base_url('User'); ?>">
                                    <i class="fas fa-user fa-sm fa-fw mr-2
text-gray-400"></i>
                                        Profile Saya

```

```

        </a>
        <div class="dropdown-divider"></div>
        <a class="dropdown-item" href="{?=
base_url('Autentifikasi/logout'); ?}" data-toggle="modal" data-
target="#logoutModal">
            <i class="fas fa-sign-out-alt fa-sm
fafw mr-2 text-gray-400"></i>
            Logout
        </a>
    </div>
</li>
</ul>
</nav>
<!-- End of Topbar -->
<!-- Dashboard -->
<div class="row justify-content-center">
    <div class="col-xl-3 col-md-6">
        <div class="card bg-primary text-white mb-4">
            <div class="card-body">Kelembaban Tanah</div>
            <div class="card-footer d-flex align-items-center
justify-content-between">
                <strong class="text-dark">{?= isset($latest) &&
isset($latest->tanah) ? $latest->tanah . ' ' : 'Belum ada data';
?}></strong>
                <div class="small text-white"><i class="fas fa-
angle-right"></i></div>
            </div>
        </div>
    </div>
    <div class="col-xl-3 col-md-6">
        <div class="card bg-warning text-white mb-4">
            <div class="card-body">Suhu</div>
            <div class="card-footer d-flex align-items-center
justify-content-between">
                <strong class="text-dark">{?= isset($latest) &&
isset($latest->udara) ? $latest->udara . ' ' : 'Belum ada data';
?}></strong>
                <div class="small text-white"><i class="fas fa-
angle-right"></i></div>
            </div>
        </div>
    </div>
</div>
</div>

<div class="row">
    <div class="container mt-5">
        <h3>Grafik Kelembaban Tanah & Suhu</h3>
        <canvas id="sensorChart" width="400"
height="150"></canvas>
    </div>
    <script src="https://cdn.jsdelivr.net/npm/chart.js"></script>
    <script>
        setInterval(() => location.reload(), 10000); // refresh
        tiap 10 detik
    </script>

```

```

<script>
    const ctx =
document.getElementById('sensorChart').getContext('2d');

    const labels = [
        <?php foreach ($grafik as $row): ?> "<?= date('H:i',
strtotime($row->waktu)) ?>",
        <?php endforeach; ?>
    ];

    const dataTanah = [
        <?php foreach ($grafik as $row): ?>
            <?= $row->tanah ?>,
        <?php endforeach; ?>
    ];

    const dataUdara = [
        <?php foreach ($grafik as $row): ?>
            <?= $row->udara ?>,
        <?php endforeach; ?>
    ];

    const sensorChart = new Chart(ctx, {
        type: 'line',
        data: {
            labels: labels.reverse(), // biar urutan waktu
dari lama ke baru
            datasets: [{
                label: 'Kelembaban Tanah (%)',
                data: dataTanah.reverse(),
                backgroundColor: 'rgba(0, 123, 255, 0.3)',
                borderColor: 'rgba(0, 123, 255, 1)',
                fill: true,
                tension: 0.3
            },
            {
                label: 'Suhu / Kelembaban Udara (%)',
                data: dataUdara.reverse(),
                backgroundColor: 'rgba(40, 167, 69, 0.3)',
                borderColor: 'rgba(40, 167, 69, 1)',
                fill: true,
                tension: 0.3
            }
        ]
    },
    options: {
        responsive: true,
        scales: {
            y: {
                beginAtZero: true,
                suggestedMax: 100
            }
        }
    }
    });
</script>

```

</div>
</div>