LAMPIRAN

1. *Source Code* Pengambilan Query

```php
$query = mysqli_query($conn, "SELECT COUNT(*) AS total FROM
permintaan_kayu");
$row = mysqli_fetch_assoc($query);
$result["recordsTotal"] = intval($row["total"]);

$query = mysqli_query($conn, "SELECT COUNT(*) AS filtered FROM
permintaan_kayu WHERE tahun LIKE '%{$s}%' OR kayu LIKE '%{$s}%'");
$row = mysqli_fetch_assoc($query);
$result["recordsFiltered"] = intval($row["filtered"]);

$query = mysqli_query($conn, "SELECT * FROM permintaan_kayu WHERE
tahun LIKE '%{$s}%' OR kayu LIKE '%{$s}%' ORDER BY {$o[0]} {$o[1]}
LIMIT {$p},{$e}");

$result["data"] = array();
$baris = 0;

$bulan = array(null, "Januari", "Februari", "Maret", "April", "Mei", "Juni", "Juli",
"Agustus", "September", "Oktober", "November", "Desember");

while($row = mysqli_fetch_assoc($query)) {
        $tombol = array(
            "<button class='btn btn-success btn-tooltip btn-aksi-sm-left'
onclick='edit({$baris});' title='Edit'><i class='fa fa-pencil'></i></button>",
            "<button class='btn btn-danger btn-tooltip btn-aksi-sm-right'
onclick='hapus({$baris});' title='Hapus'><i class='fa fa-trash'></i></button>"
        );
        array_push($result["data"], array(
            $row["id_permintaan"],
            $bulan[intval($row["periode"])],
            $row["tahun"],
            htmlspecialchars($row["kayu"]),
            number_format($row["jml_permintaan"]),
            "<center><div
style='width:88px;'>{$tombol[0]}{$tombol[1]}</div></center>",
            $row["jml_permintaan"]
        ));
        $baris++;
}
echo json_encode($result);
?>
```

2. *Source code* Perhitungan Prediksi dengan metode Double Exponential Smoothing

```
$arr = array();
$arr2 = array();

$arr3 = array();

while($row = mysqli_fetch_assoc($query)) {
        $arr[] = floatval($row["jml_permintaan"]);
        $arr3[] = array(
                "xt"                    => floatval($row["jml_permintaan"]),
                "s't"           => "",
                "s''t"          => "",
                "at"            => "",
                "bt"            => "",
                "ft"            => "",
                "et"            => "",
                "|et|"          => "",
                "|et|/xt"=> ""
        );
}

$hasil = array();

$jml_data = count($arr);

$index = 0;
for ($alpha=0.1; $alpha <= 0.9; $alpha += 0.1) {
        $counter = 0;


        $tot_1 = 0;
        $tot_2 = 0;

        while ($counter < $jml_data){
                $xt = $arr3[$counter]["xt"];

                if($counter==0){
                        $arr3[$counter]["s't"] = $xt;
                        $arr3[$counter]["s''t"] = $xt;
                        $arr3[$counter]["at"] = $xt;
                        $arr3[$counter]["bt"] = 0;
                        $arr3[$counter]["ft"] = "";
                        $arr3[$counter]["et"] = "";
                        $arr3[$counter]["|et|"] = "";
```

```
                        $arr3[$counter]["|et|/xt"] = "";
            }elseif ($counter >=1 && $counter < $acuan) {
                        $arr3[$counter]["s't"] = ($alpha*$xt)+((1-
$alpha)*$arr3[$counter-1]["s't"]);
                        $arr3[$counter]["s''t"] =
($alpha*$arr3[$counter]["s't"])+((1-$alpha)*$arr3[$counter-1]["s''t"]);
                        $arr3[$counter]["at"] = (2*$arr3[$counter]["s't"])-
$arr3[$counter]["s''t"];
                        $arr3[$counter]["bt"] = ($alpha/(1-
$alpha))*($arr3[$counter]["s't"]-$arr3[$counter]["s''t"]);
                        $arr3[$counter]["ft"] = "";
                        $arr3[$counter]["et"] = "";
                        $arr3[$counter]["|et|"] = "";
                        $arr3[$counter]["|et|/xt"] = "";
            }else{
                        $arr3[$counter]["s't"] = ($alpha*$xt)+((1-
$alpha)*$arr3[$counter-1]["s't"]);
                        $arr3[$counter]["s''t"] =
($alpha*$arr3[$counter]["s't"])+((1-$alpha)*$arr3[$counter-1]["s''t"]);
                        $arr3[$counter]["at"] = (2*$arr3[$counter]["s't"])-
$arr3[$counter]["s''t"];
                        $arr3[$counter]["bt"] = ($alpha/(1-
$alpha))*($arr3[$counter]["s't"]-$arr3[$counter]["s''t"]);
                        $arr3[$counter]["ft"] = ($arr3[$counter-
1]["at"]+$arr3[$counter-1]["bt"]);
                        $arr3[$counter]["et"] = ($xt - $arr3[$counter]["ft"]);
                        $arr3[$counter]["|et|"] = abs($arr3[$counter]["et"]);
                        $arr3[$counter]["|et|/xt"] = ($arr3[$counter]["|et|"]/$xt);
            }

            $tot_1 = $tot_1 + $arr3[$counter]["|et|"];
            $tot_2 = $tot_2 + $arr3[$counter]["|et|/xt"];

            $counter++;
        }
```

3. *Source code* Perhitungan MAD dan MAPE

```
$arr2[$index]=$arr3;

        $mad = $tot_1/($jml_data-$acuan);
        $mape = ($tot_2/($jml_data-$acuan)*100);

        $hasil[$index]['mad'] = $mad;
        $hasil[$index]['mape'] = $mape;
```

```php
        $hasil[$index]['alpha'] = $alpha;
        $index++;
}

$arr_json["isi"] = "
<div class='table-responsive'>
        <table class='table table-striped table-bordered' style='width:100%;'
id='tabel'>
                <thead>
                        <tr>
                                <th style='width:120px;'>Kayu</th>
                                <th style='width:120px;'>Alpha</th>
                                <th style='width:160px;'>Tahun</th>
                                <th>Acuan</th>
                                <th style='width:140px;'>MAD</th>
                                <th style='width:140px;'>MAPE</th>
                        </tr>
                </thead>
                <tbody>
";
foreach($hasil as $h) {
        $arr_json["isi"] .= "
                        <tr>
                                <td style='text-
align:center;'>".$_POST["kayu"]."</td>
                                <td style='text-align:center;'>".$h["alpha"]."</td>
                                <td style='text-align:center;'>".$dari." -
".$sampai."</td>
                                <td style='text-align:center;'>".($acuan === 0 ?
"Data Keseluruhan" : $acuan." bulan")."</td>
                                <td style='text-
align:right;'>".number_format($h["mad"], 3, ",", ".")."</td>
                                <td style='text-
align:right;'>".number_format($h["mape"], 3, ",", ".")."%</td>
        ";
        $arr_json["series_mape"][] = round($h["mape"], 3);
        $arr_json["series_mad"][] = round($h["mad"], 3);
}
$arr_json["isi"] .= "
                </tbody>
        </table>
</div>
";
$arr_json['data'] = $arr2;
$arr_json['hasil'] = $hasil;
```

```
echo json_encode($arr_json);
```