PRAKTIKUM

# PEMROGRAMAN WEB

## SEMESTER GENAP TAHUN AKADEMIK 2021/2022

Tanggal

.....

Materi

HPH dan Database

**PRODI SISTEM INFORMASI**
**FAKULTAS TEKNIK**
**UNIVERSITAS NUSANTARA PGRI KEDIRI**

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# BAB I

# DASAR TEORI

Mysql API (Application Programming Interface) merupakan komponen yang digunakan untuk berkomunikasi dengan database Mysql menaki PHP.

⇒ Proses query Database

untuk melakukan proses query database maka perlu dilakukan 4 langkah dibawah ini

1. Membuat koneksi ke server database dan menentukan database yang akan digunakan
2. Membuat SQL (Structure Query Language)
3. Melakukan proses query
4. Mengumpulkan hasil query kedalam sebuah variabel untuk ditampilkan / diproses

⇒ Mysqli

Mysql Improved (Mysqli) merupakan peningkatan teknik pengaksesan terhadap database Mysql yang merupakan perkembangan dari PHP 5 X atau yang terbaru. Dengan menggunakan Mysql memungkinkan untuk mengakses stored procedured stored function atau prepared statement.

Mysql extension memiliki sejumlah manfaat diantaranya adalah

- Menggunakan interface object oriented
- Mendukung penggunaan prepared statement
- Mendukung penggunaan multiple statement
- Mendukung penggunaan transaction
- Meningkatan terhadap kemampuan pencarian kesalahan program (debunggung)
- Mendukung pengabung server

* daftar API Mysql yang umum dipakai sebagai berikut

| API | |
|---|---|
| 1. mysql → query | mengirimkan query ke database yang aktif |
| 2 $mysql_result → fetch_array | menampilkan data hasil query yang dapat diakses dengan nomor array atau nama field |
| 3. $mysql_result → num_rows | mengambil jumlah baris / data hasil dari proses query |
| 4. $mysql → error | menampilkan pesan kesalahan / kegagalan koneksi |

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⇒ koneksi Database

Contoh koneksi database mysql dengan menggunakan PHP dari API MySQLi

```
<? php
// mendefinisikan variabel
$ hostname = "localhost"; // alamat server db mysql
$ username = "root";      // username db mysql
$ Password = "";          // Password db mysql
$ database = "akademik"   // nama database mysql
$ koneksi = new mysqli ($ hostname, $ username, $ Password,
            $ database) or die ("koneksi server database gagal
            " mysqli -> error ()));
  echo "koneksi server database berhasil";
  ?>
```

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# BAB II

# PERCOBAAN DAN LATIHAN

⇒ Percobaan

Database Akademik dengan nama mhs, krs, mk dan ta

| akademik mhs |
|---|
| npm = varchar (20) |
| nama = varchar(50) |
| alamat = varchar (200) |

| akademik krs |
|---|
| id = int (11) |
| mhs_npm = varchar (20) |
| mk_kode = varchar (20) |
| sem = enum ('Ganjil', 'Genap') |
| ta_id = varchar |
| nilai = int (11) |

| akademik mk |
|---|
| kode = varchar (20) |
| nama = varchar (50) |

| akademik ta |
|---|
| id = varchar (20) |
| nama = varchar (50) |

koneksi.Php

```
<? Php
$ servername = "localhost";
$ username = "root"
$ Password = " ";
$ dbname = "akademik";

// create connection
$ conn = new mysqli ($ servername, $ username, $ Password, $ dbname);
// Check connection
IF ($ com -> connect_error) {
    die ("connection Failed : ". $ com -> connect_ error);
}
?>
```

Menu.Php

```
<a href = "mhs.Php" > view </a> | <a hrf = "mhs_add.Php" > ADD </a>
```

mhs.Php

```
< ? Php
include 'koneksi.Php';
?>
<! Doctype html >
<html>
< head>
    <title > mhs </title >
</head>
<body>
< ? Php include 'menu Php'; ? >
< table width = '100 % ' border = '1' >
```

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```
<thead>
  <tr>
    <th width='5%'>No.</th>
    <th width='15%'>NPM</th>
    <th width='25%'>nama</th>
    <th>alamat</th>
  </tr>
</thead>
<tbody>
<?php
    $sql = "SELECT * from mhs";
    $res = $conn -> query ($sql);
    IF ($res -> num_rows >0) {
        $i = 0;
        while ($dat = $res -> Fetch_assoc ()) {
            $i++;
            echo "<tr>
                <td>$i</td>
                <td><a href = 'mhs -detil.php ?npm=.$dat
                ['npm'], "'>".
$dat ['npm'], "</a></td>
                <td>.$dat ["nama"]. "</td>
                <td>".$dat ["alamat"]. '</td>
            }
        }
?>
</tbody>
</table>
</body>
</html>
```

mhs_add.php

```
<!DOCTYPE html>
<html>
<head>
    <title>mhs add</title>
</head>
<body>
<?php include 'menu.php';?>
<br>
<form name = 'myForm' action = 'mhs_proc.php' method = 'POST'>
  NPM
  <br><input type = "text" name = 'npm' id = "npm" >
  <br> nama
  <br><input type = "text" name = "nama" size = '30' >
  <br> Alamat
  <br><input type = "text" name = "alamat" id = "alamat" size = "50" >
  <br><input type = "submit_add" id = submit_add" submit_add" value =
  "simpan" >
</form>
</body>
</html>
```

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mhs-edit.php

```
<? php
include 'koneksi.php';
$ npm = $_GET ['npm'];
$ sql = " SELECT * FROM mhs WHERE npm = '$ npm' ";
$ res = $conn -> query ($sql)
$ dat = $ res -> fetch_assoc ();
?>
<!DOCTYPE html>
<html>
<head>
<? php include 'menu.php';?>
<br>
<Form name = 'myform' action = " mhs_proc.php". method = "POST" >
    NPM
    <br><input type = 'text" name = 'npm' id = " npm" value = "<? php echo
    $ dat ['nama'] ?>">
    <br>Alamat
    <br><input type = "text" name = "alamat' size = "50" value = "<? = $ dat
    [alamat] ?>">
    <br><input type = "submit" name = "submit_edit" value = "SIMPAN">
    <input type = "submit" name = " submit_delete" id = "submit_delete".
    value = 'HAPUS' >
</Form>
</body>
</html>
```

mhs_proc.php

```
<? Php
include 'koneksi.php';
if (isset ($_POST ['submit_add'])) {
    $ npm = $_ POST ['npm'];
    $ nama = $_ POST ['nama'];
    $ alamat = $_ POST ['alamat'];
    $ sql = " INSERT INTO mhs
                (npm, nama, alamat)
                VALUES
                ('$ npm', '$ nama', '$ alamat') ";
    if ($ conn -> query ($sql))
        die (' tambah MHS Gagal');
    else
        header (" Location: mhs.php");
if (isset ($_POST ['submit_edit'])) {
    $ npm = $_ POST ['npm'];
    $ nama = $_ POST ['nama'];
    $ alamat = $_ POST ['alamat'];
```

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```
        $ sql = "UPDATE mhs
                    SET nama = '$name', alamat = '$alamat'
                    WHERE npm = '$ npm' ";
        if (! $conn -> query ($ sql)
                die ('Edit MHS Gagal')
        else
            header " ("Location : mhs-php ");
}
if (isset ($_POST ['submit_delete])) {
    $npm = $_POST ['npm'];
    $ sql = "DELETE FROM mhs
                WHERE npm = '$ npm' ";
    if (!$ conn -> query ($ sql)
        die ('HAPUS MHS Gagal');
    else
        header ("location: mhs.php ");
}
?>
```

=> Latihan

Membuat Program Php untuk menambah, menampilkan mengubah dan menghapus data dari tabel mk, ta dan krs

A. Menambah data tabel mk buat file mk_add.php data ta buat file ta.add untuk krs buat krs_add.php untuk sintak mirip dengan mhs_add.php hanya mengubah beberapa nama data sesuai dengan data mk, ta dan krs

contoh :

membuat mk_add.php maka rubah sintaks dari mhs_add.php bagian Npm, Nama, alamat menjadi kode dan nama

<br><input type = "text" name = "npm" id = "npm"> DIRUBAH MENJADI KODE

<br><input type = "text" name = "kode" id = "kode">

begitu juga untuk nama dan data lain pada ta & krs

B. Menampilkan data tabel mk, ta dan krs sintaks seperti mhs.php kita buat file mk.php ta.php dan krs.php

sintaks yang diubah yaitu bagian

1) <th width = '10%'> NPM diubah sesuai data tabel contohnya dalam data mk kode maka diubah menjadi <th width = '10%'> KODE

2) $ sql = " select * FROM mhs. diubah sesuai nama tabel jika untuk mk maka berubah menjadi

$ sql = " select " FROM mk

begitu pula tabel lainnya

yang diubah juga pada

3) <td><a href = 'mhs_detail.php ?npm =" $det ['npm']" '>

Edit </a></td> diubah jadi mengikuti data masing tabel

<td><a href = 'mk_detail.php ? (kolom Pertama mk) = " $ det ['kolom Pertama mk]" '> Edit </a></td>

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Implementasi <td> <a href = 'mk.detail.php ? kode :" $ dat [kode] "
> Edit </a> </td>
Terakhir rubah
9) <td>" $ dat [ "npm" ] " </td> menjadi sesuai data mk
menjadi <td>" $ dat [ "kode" ] . " </td>
Catatan rubah sintaks sesuai data yang diinginkan baik dari mk, ta maupun krs

C. Merubah dan menghapus data buat file dengan nama mk-detail.php ta-detail.php krs-detail.php Rubah sintaks dari mhs.detail.php sintak yang dirubah begitu
1) $ SQL = "SELECT * FROM mhs WHERE 'npm = ' $ npm ' ", rubah jadi $ SQL = " SELECT * FROM mk WHERE kode = ' $ kode ' ";
2) Rubah tiap href masing2x jika mk maka href = " mk.php dan href = mk.edit.php dan action = " mk.proc.php "
3) Rubah nama, npm, alamat pada mhs-detail.php sesuai data jadi mk-detail maka rubah menjadi kode & nama

D. Untuk memproses semua data buat mk_proc.php, ta proc.php krs_proc.php rubah sintaks dari mhs-proc.php
Bagian yang dirubah yaitu
1) rubah npm, nama, alamat serta $ npm, $ nama, $ alamat sesuai dengan data yang ada pada tabel yang akan dibuat jika mk maka rubah menjadi kode, nama serta $ kode dan $ nama
2) rubah header location dari mhs.php menjadi sesuai data jika mk maka mk.php jika ta maka ta.php begitu juga dengan krs menjadi krs.php
Untuk lebih jelasnya dapat dilihat pada tampilan program

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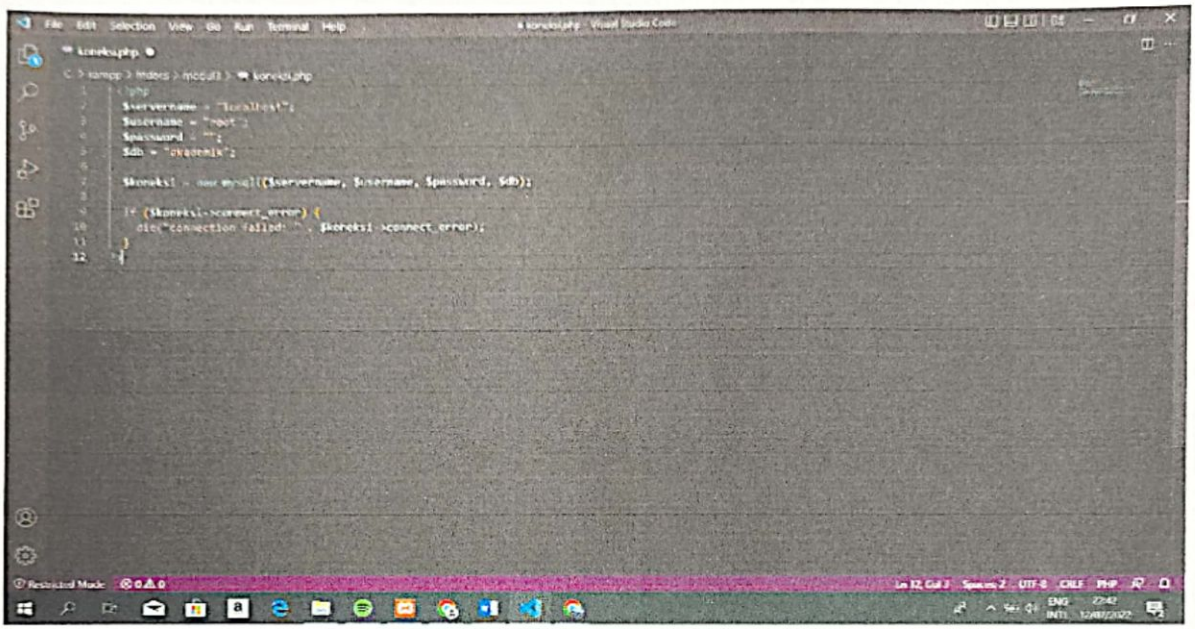
# BAB III

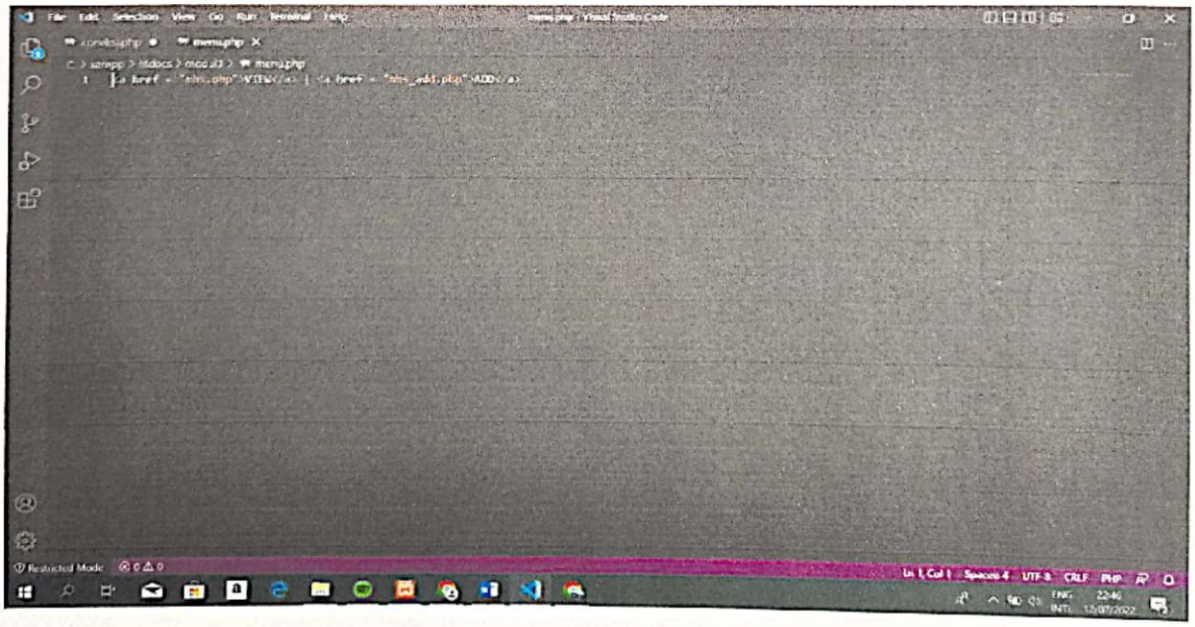
# TAMPILAN PROGRAM

**Percobaan**

koneksi.php




Menu.php

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mhs.php

```php
<?php
  include "koneksi.php";
?>

<!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, initial scale=1.0">
  <title>mhs</title>
</head>
<body>
  <?php include "menu.php"; ?>
  <table width="100%" border="1">
    <thead>
      <tr>
        <th width="5%">No.</th>
        <th width="5%">Act.</th>
        <th width="15%">NPM</th>
        <th width="25%">Nama</th>
        <th width="55%">Alamat</th>
      </tr>
    </thead>
    <tbody>
      <?php
        $sql = "select * from mhs";
        $res = $koneksi->query($sql);
        if ($res->num_rows > 0) {
          $i = 0;
          while ($dat = $res->fetch_assoc()) {
            $i++;
```

```php
          while ($dat = $res->fetch_assoc()) {
            $i++;
            echo "<tr>
                  <td>$i</>
                  <td><a href='mhs_detil.php?npm=' .$dat['npm'].'>detil</a></td>
                  <td>".$dat["npm"]."</a></td>
                  <td>".$dat["nama"]."</td>
                  <td>".$dat["alamat"]."</td>
                  </tr>";
          }
        }
      ?>
    </tbody>
  </table>
</body>
</html>
```

Dipindai dengan CamScanner

Mhs_add.php

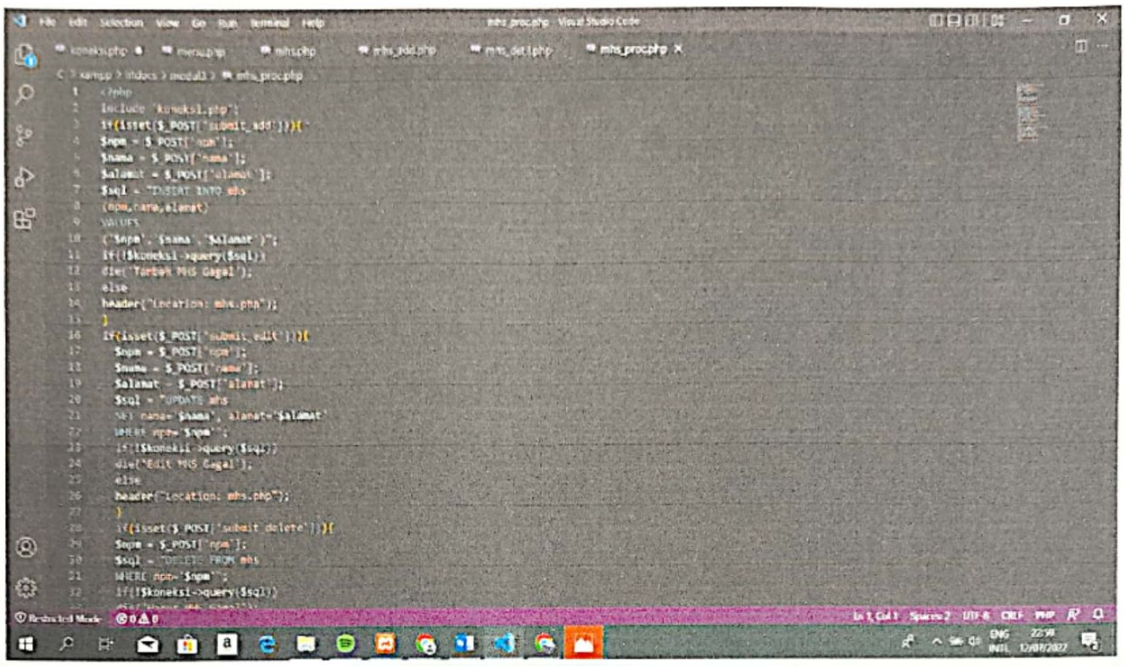
```php
<?php
  include "koneksi.php";
?>
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>mhs add</title>
</head>
<body>
    <?php include "menu.php"; ?>
    <br>
    <form name="myform" action="mhs_proc.php" method="POST">NPM
      <br><input type= "text" name= "npm" id= "npm">
      <br>Nama
      <br><input type="text" name= "nama" id="nama" size= "30">
      <br>Alamat
      <br><input type="text" name= "alamat" id= "alamat" size="50">
      <br><input type="submit" name= "submit_add" id= "submit_add" value= "SIMPAN">
    </form>
</body>
</html>
```

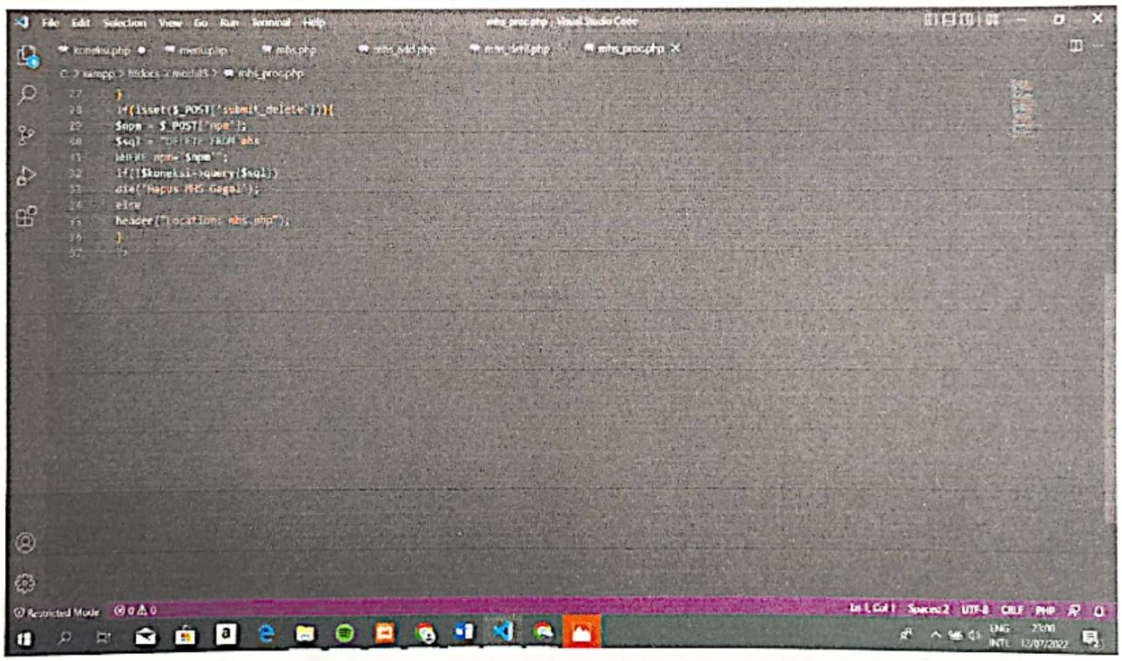
Mhs_detil.php

```php
<?php
include "koneksi.php";
$npm = $_GET['npm'];
$sql = "SELECT * FROM mhs WHERE npm='$npm'";
$res = $koneksi->query($sql);
$dat = $res->fetch_assoc();
?>
<!DOCTYPE html>
<html>
<head>
<title>mhs edit</title>
</head>
<body>
<?php include "menu.php";?>
<br>
<form name="myform" action="mhs_proc.php" method="POST">
NPM
<br><input type="text" name="npm" id="npm" value="<?php echo $dat['npm']?>">
<br>Nama
<br><input type="text" name="nama" id="nama" size="30" value="<?= $dat['nama']?>">
<br>Alamat
<br><input type="text" name="alamat" id="alamat" size="50" value="<?= $dat['alamat']?>">
<br><input type="submit" name="submit_edit" id="submit_edit" value="SIMPAN">
<input type="submit" name="submit_delete" id="submit_delete" value="HAPUS">
</form>
</body>
</html>
```

Dipindai dengan CamScanner

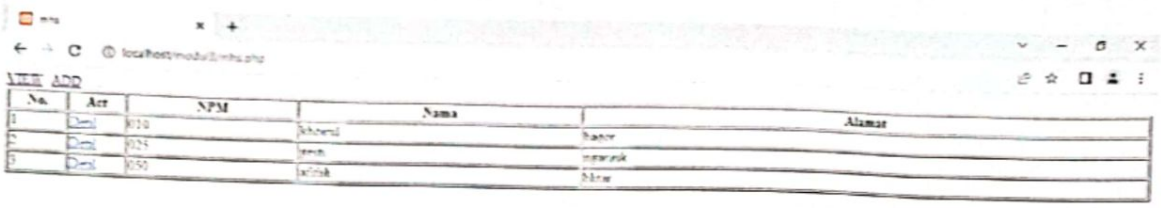
Mhs_proc.php




Dipindai dengan CamScanner

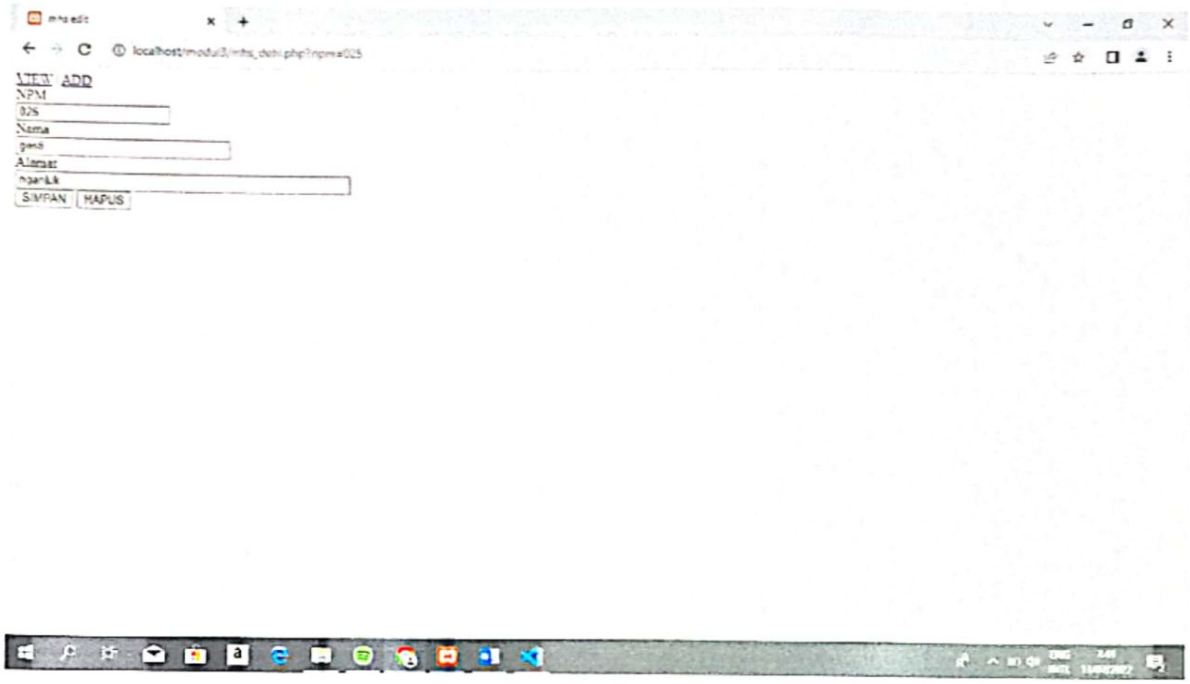
Mhs.php




Mhs_add.php

Dipindai dengan CamScanner

Mhs_detil.php




Mhs_proc.php

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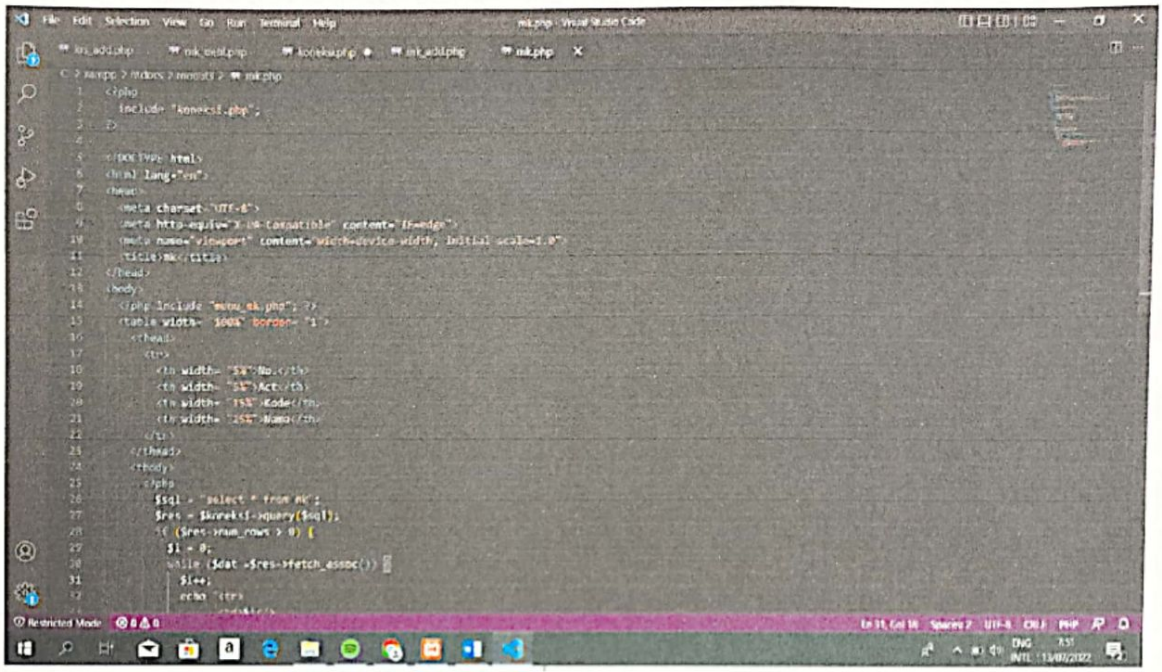
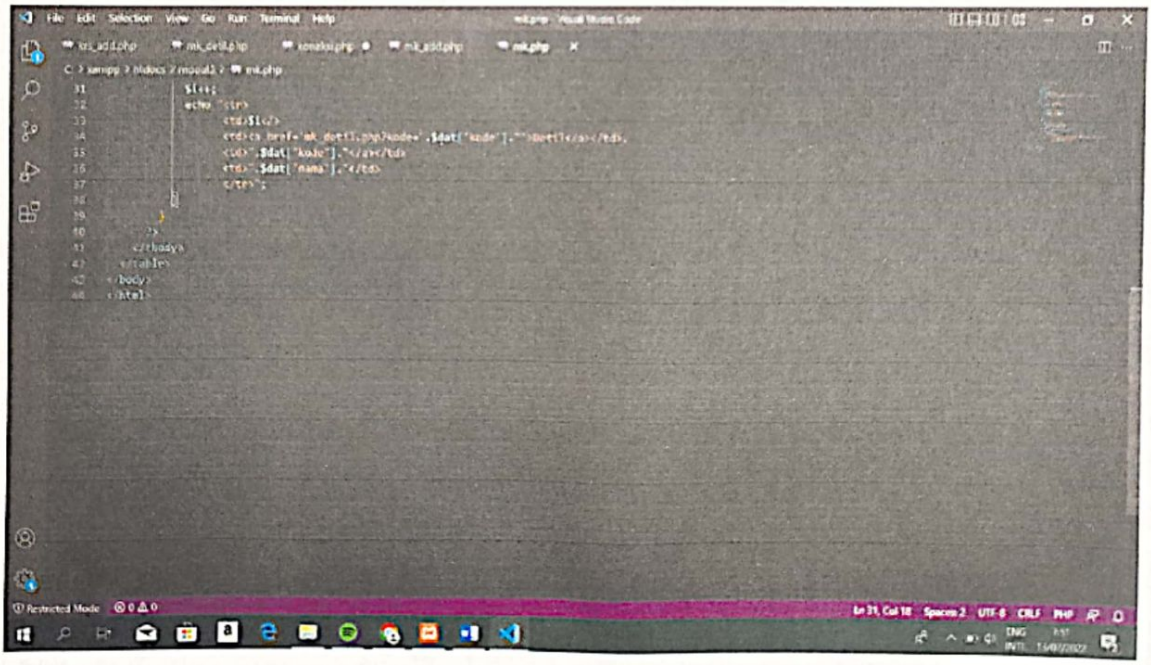
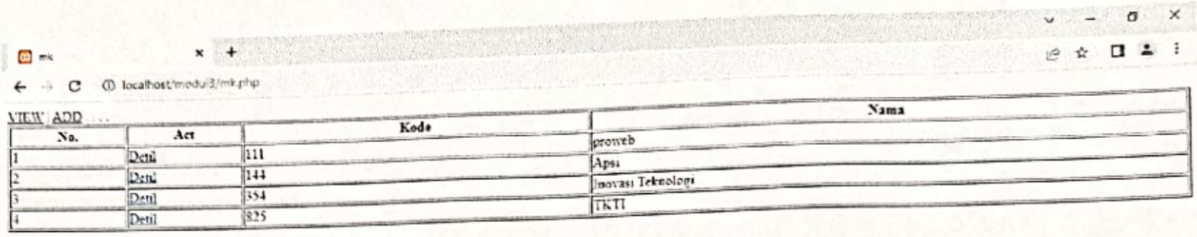
**LATIHAN**

Mk.php





Dipindai dengan CamScanner



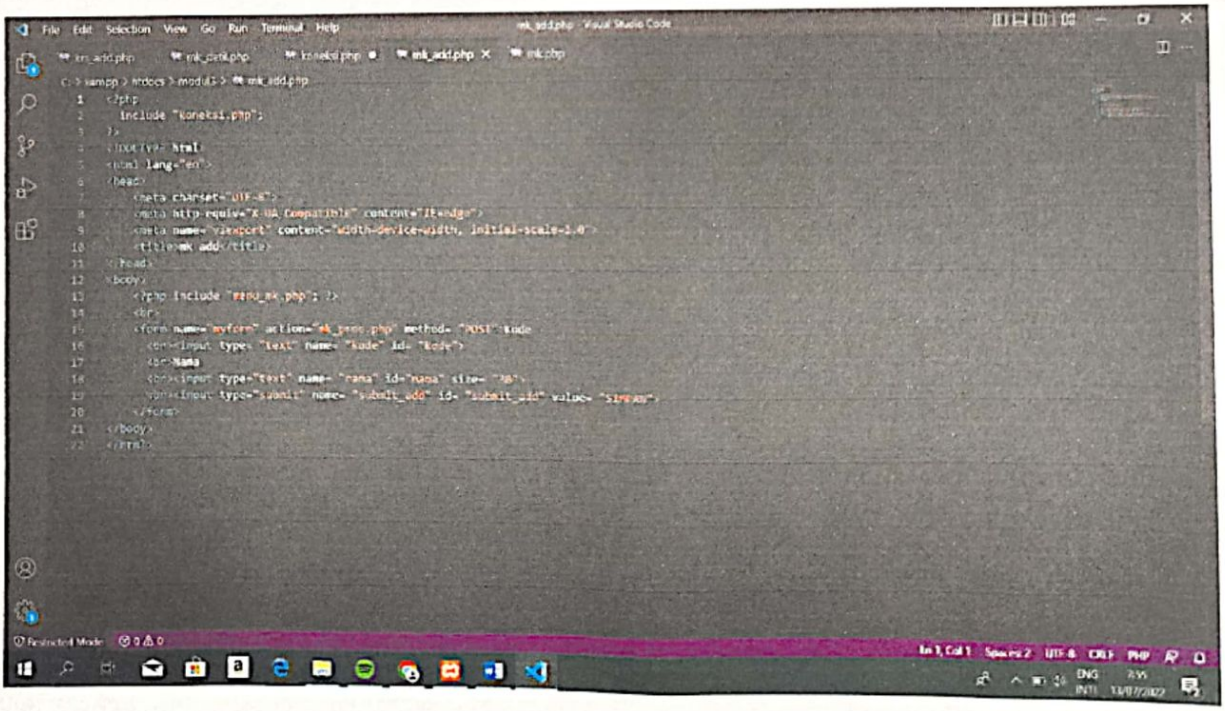
mk

localhost/modul3/mk.php

VIEW | ADD ...

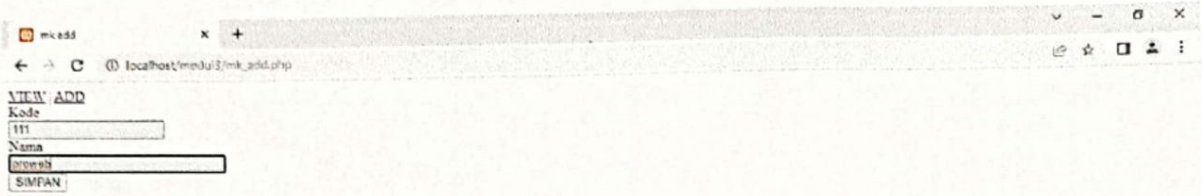
| No. | Act | Kode | Nama |
|---|---|---|---|
| 1 | Detil | 111 | proweb |
| 2 | Detil | 144 | Apsi |
| 3 | Detil | 354 | Inovasi Teknologi |
| 4 | Detil | 825 | TKTI |

Mk_add.php

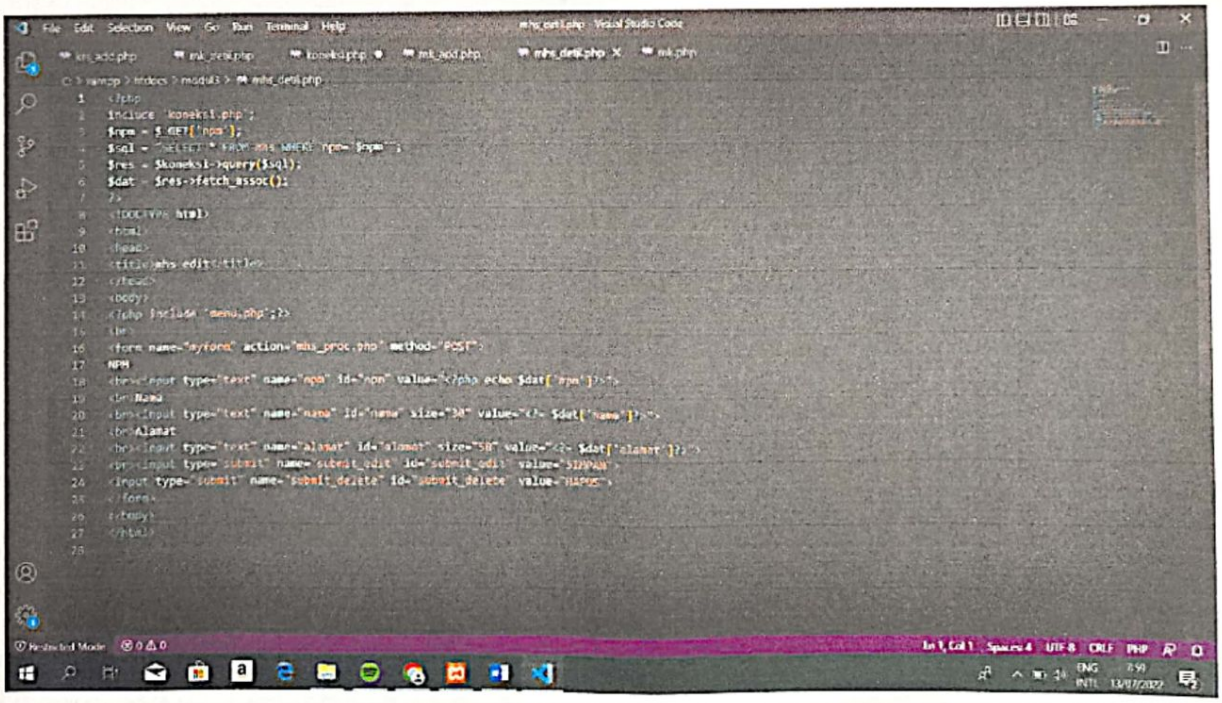


```php
<?php
  include "koneksi.php";
?>
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>mk_add</title>
</head>
<body>
    <?php include "menu_mk.php"; ?>
    <br>
    <form name="myform" action="mk_proc.php" method="POST">Kode
      <br><input type="text" name="kode" id="kode">
      <br>Nama
      <br><input type="text" name="nama" id="nama" size="30">
      <br><input type="submit" name="submit_add" id="submit_add" value="simpan">
    </form>
</body>
</html>
```

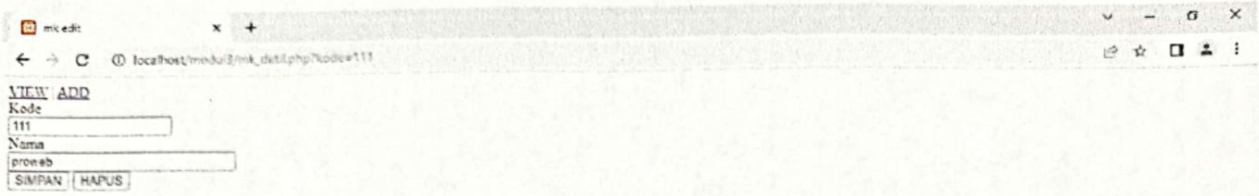
Dipindai dengan CamScanner



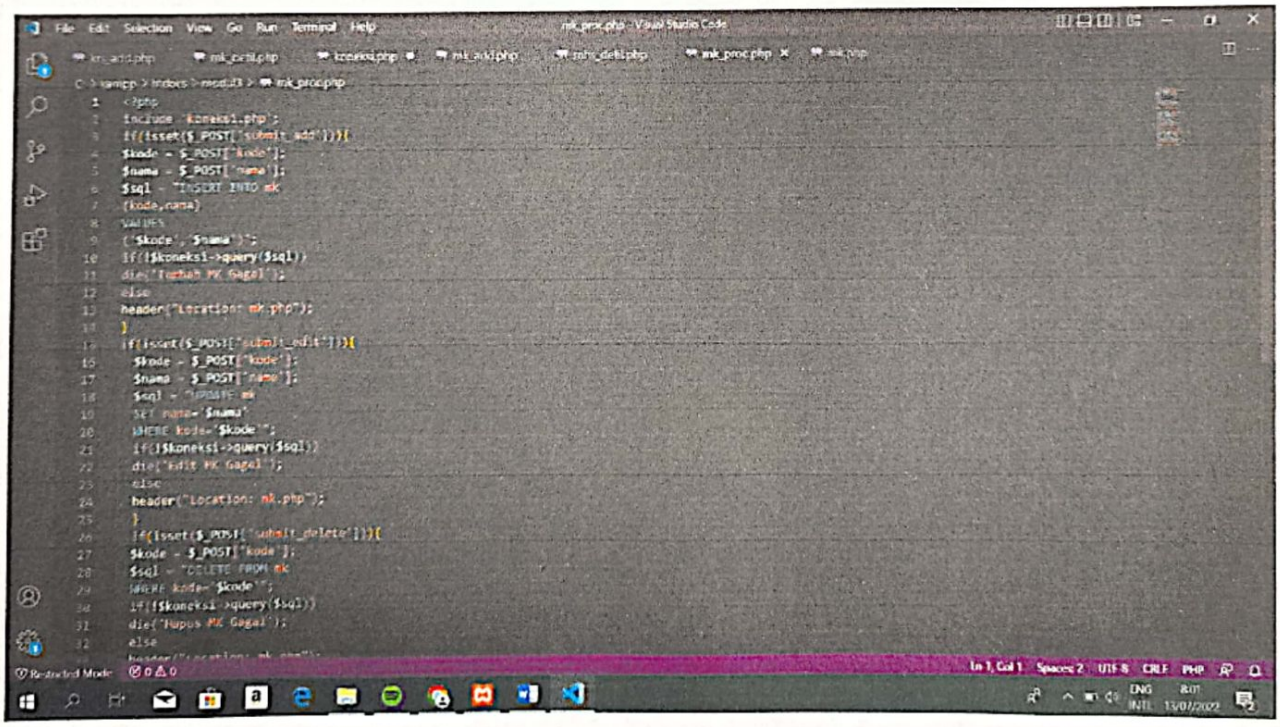
Mk_detil.php



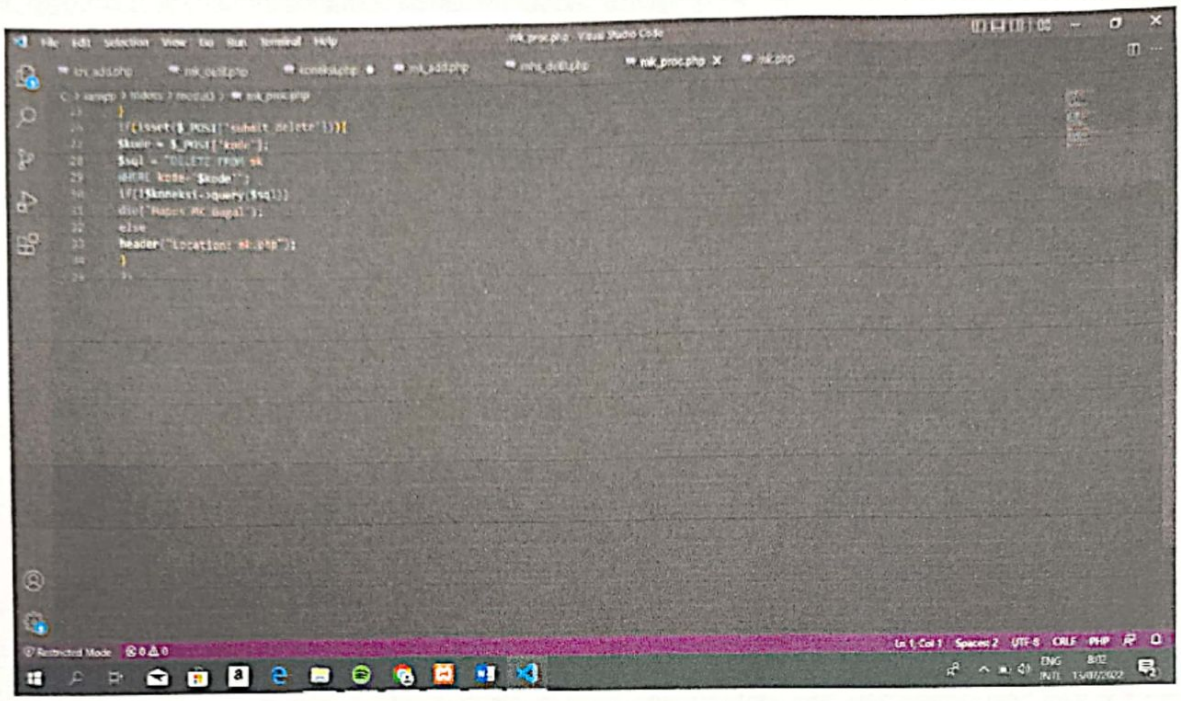

Dipindai dengan CamScanner



## Mk_proc.php

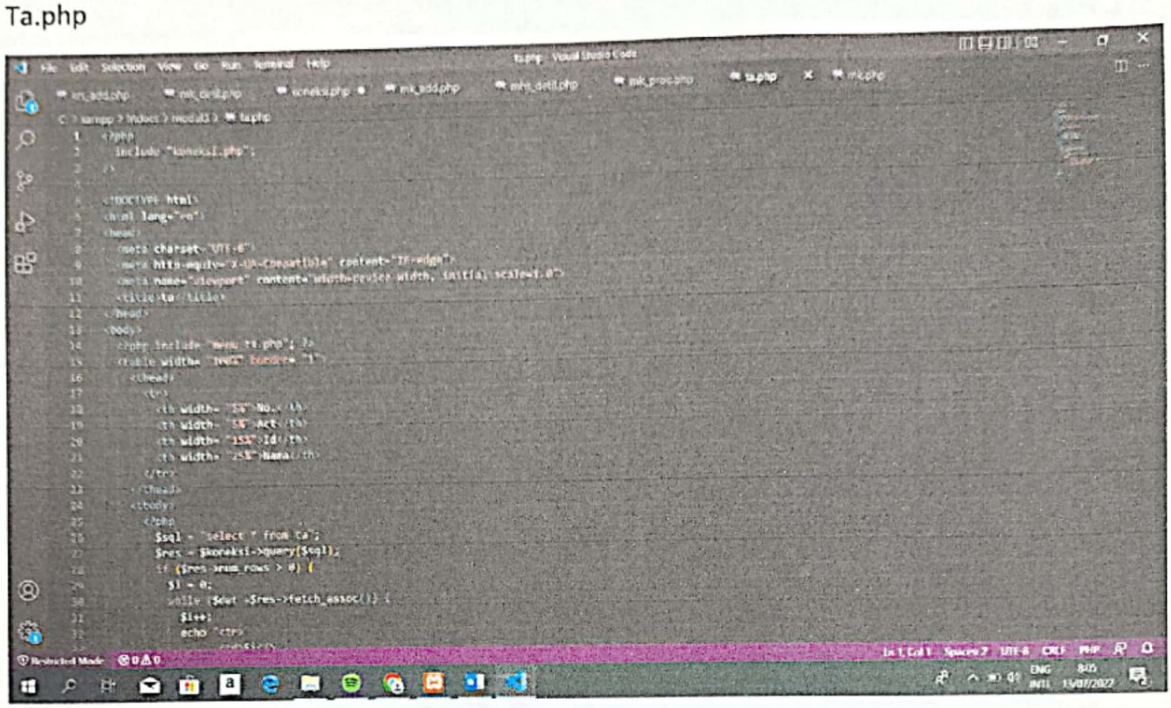


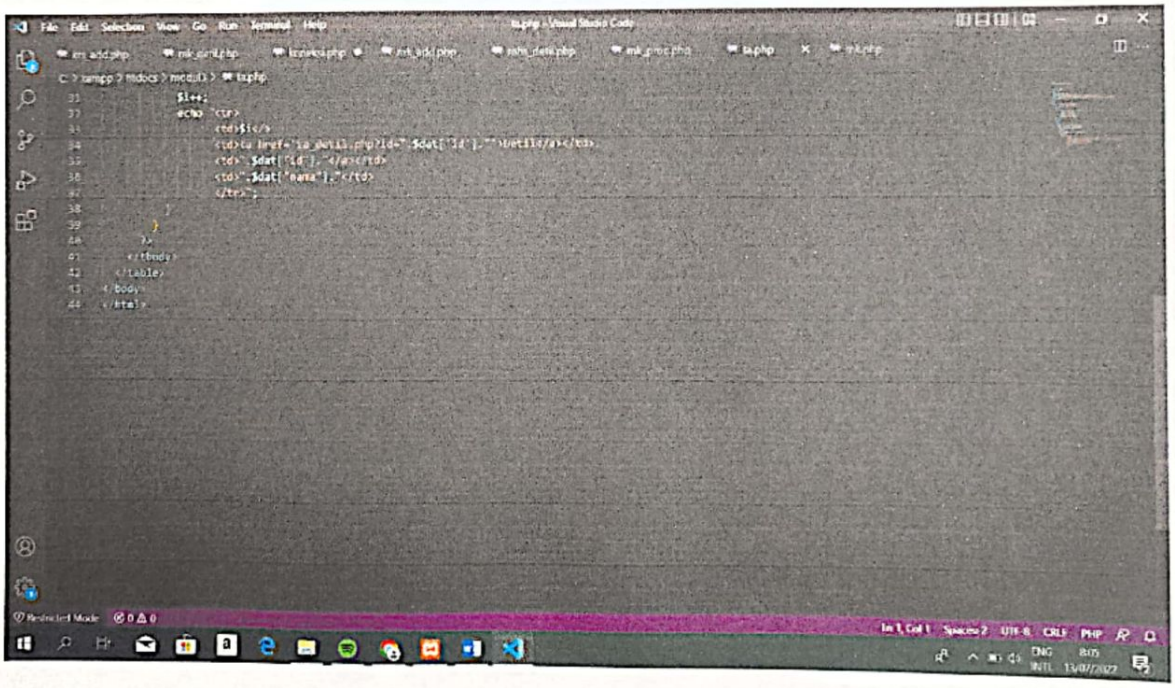

Dipindai dengan CamScanner



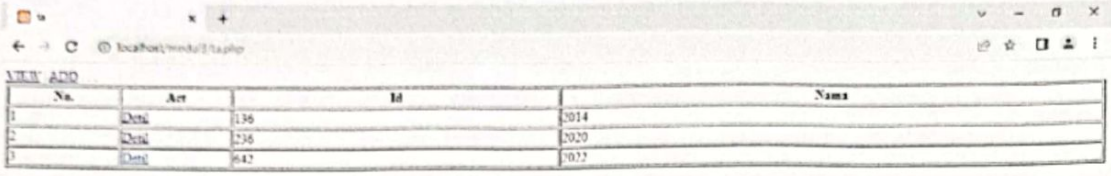
Dipindai dengan CamScanner

Ta.php





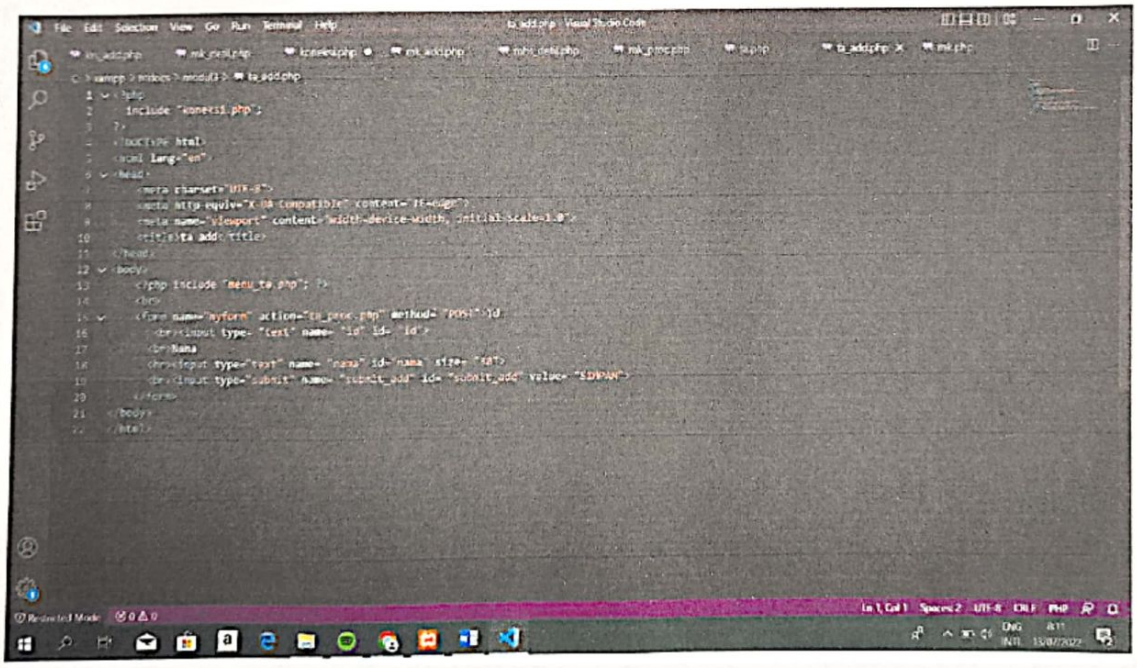
Dipindai dengan CamScanner



VIEW ADD

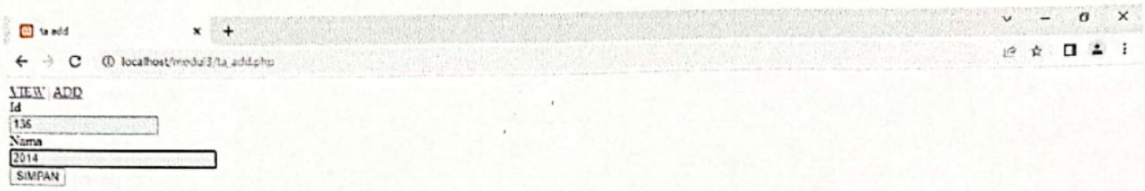
| No. | Act | Id | Nama |
|---|---|---|---|
| 1 | Del | 136 | 2014 |
| 2 | Del | 236 | 2020 |
| 3 | Del | 642 | 2022 |

Ta_add.php

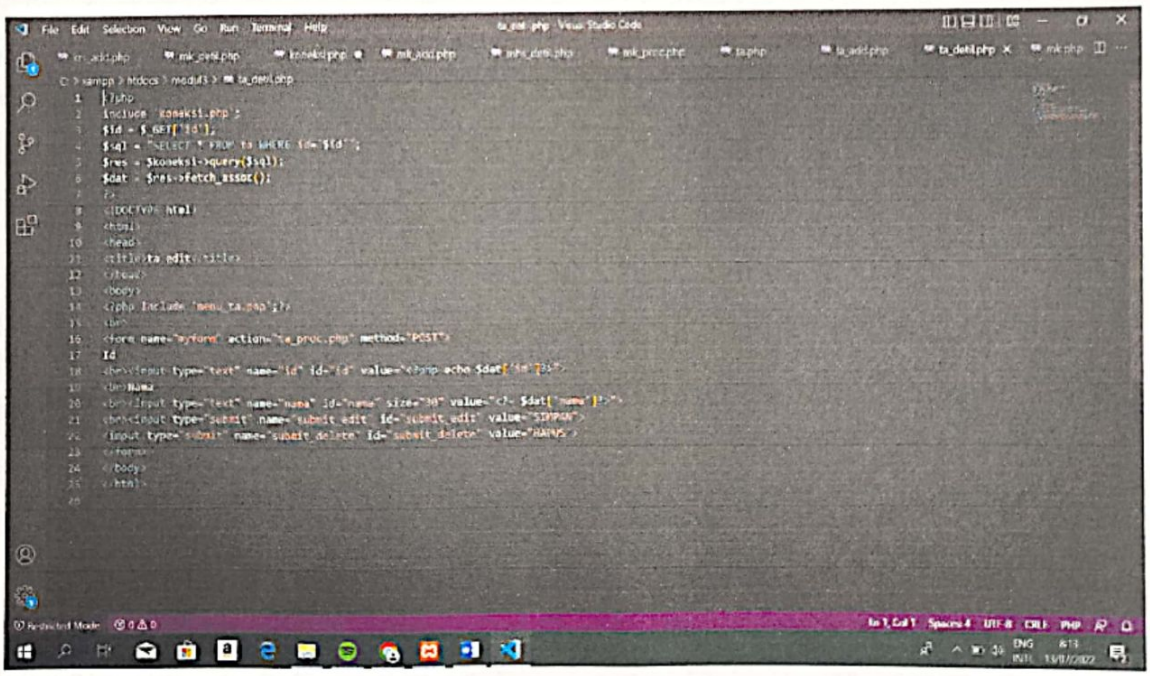


```
<?php
    include "koneksi.php";
?>
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>ta add</title>
</head>
<body>
    <?php include "menu_ta.php"; ?>
    <br>
    <form name="myform" action="ta_proc.php" method="POST">id
      <br><input type="text" name="id" id="id">
      <br>Nama
      <br><input type="text" name="nama" id="nama" size="50">
      <br><input type="submit" name="submit_add" id="submit_add" value="SIMPAN">
    </form>
</body>
</html>
```

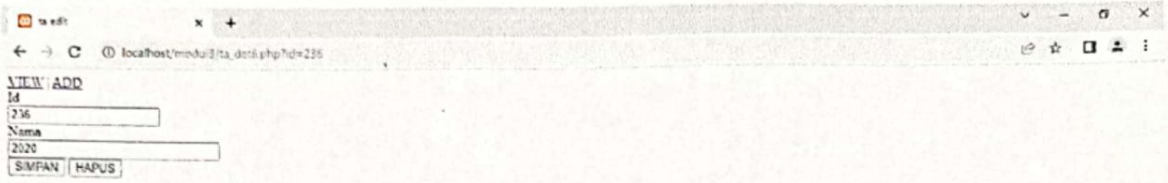
Dipindai dengan CamScanner



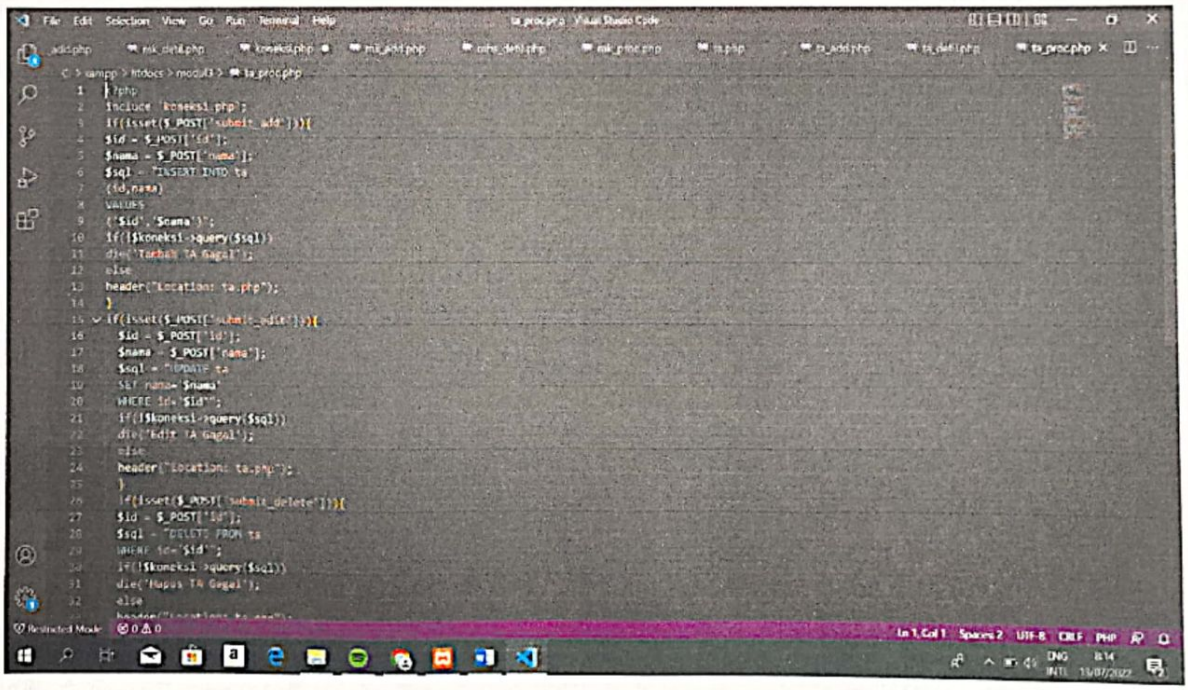

Ta_detil.php



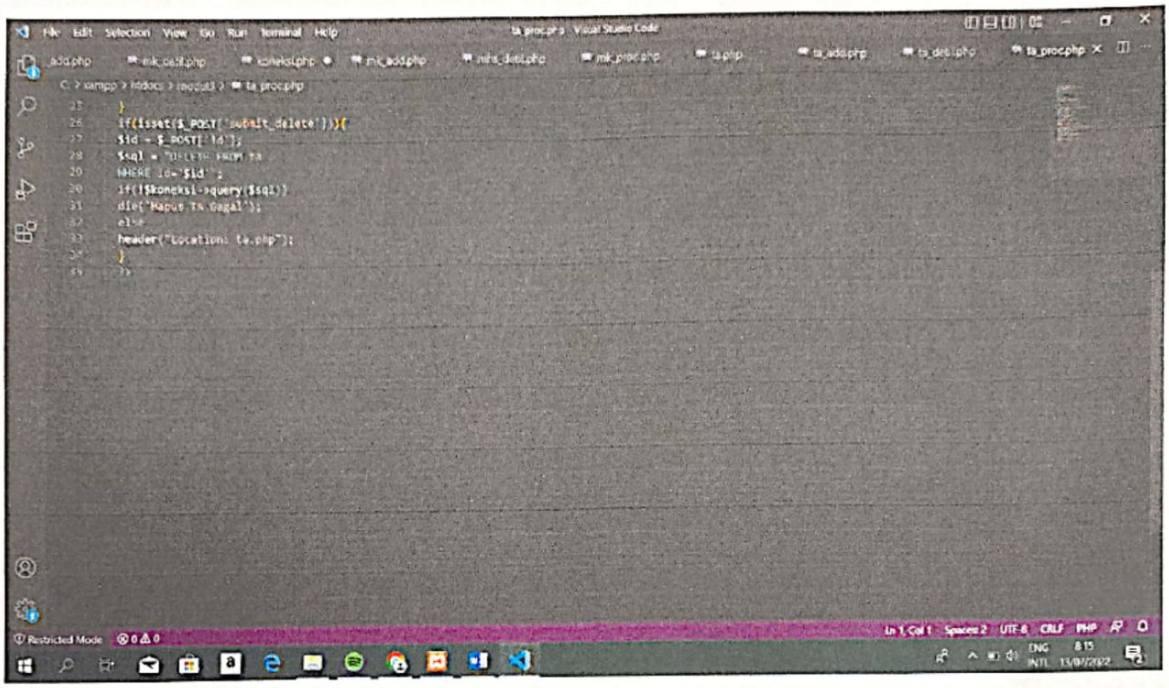

Dipindai dengan CamScanner




Ta_proc.php




Dipindai dengan CamScanner



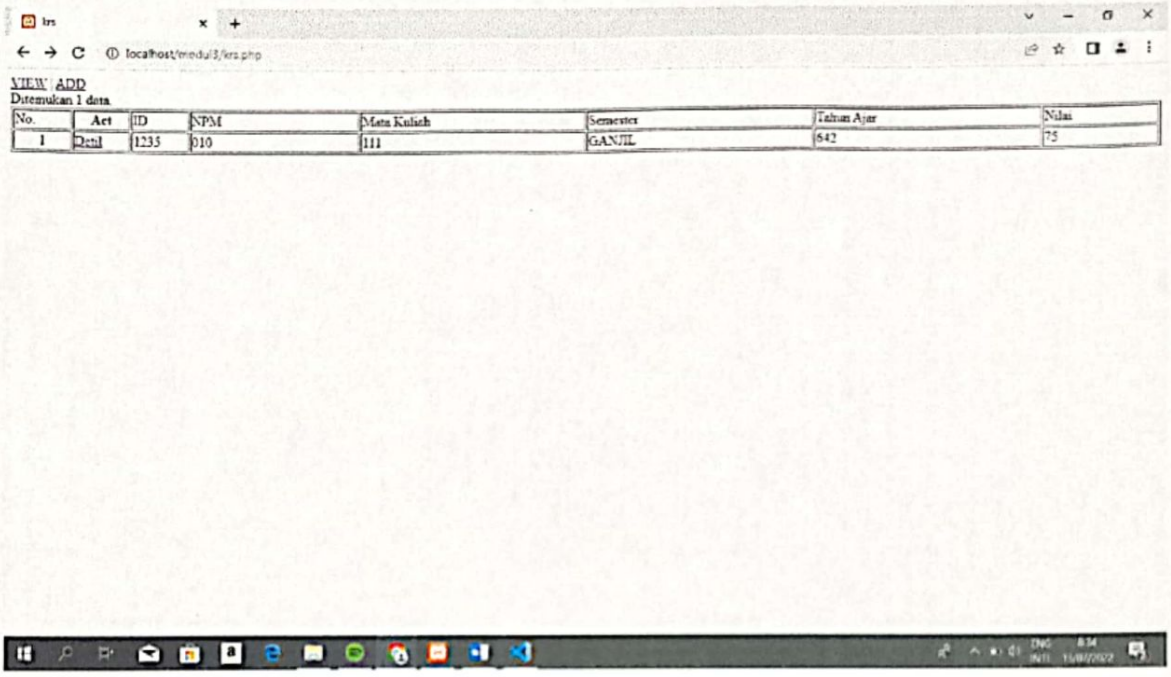
Dipindai dengan CamScanner

Krs.php

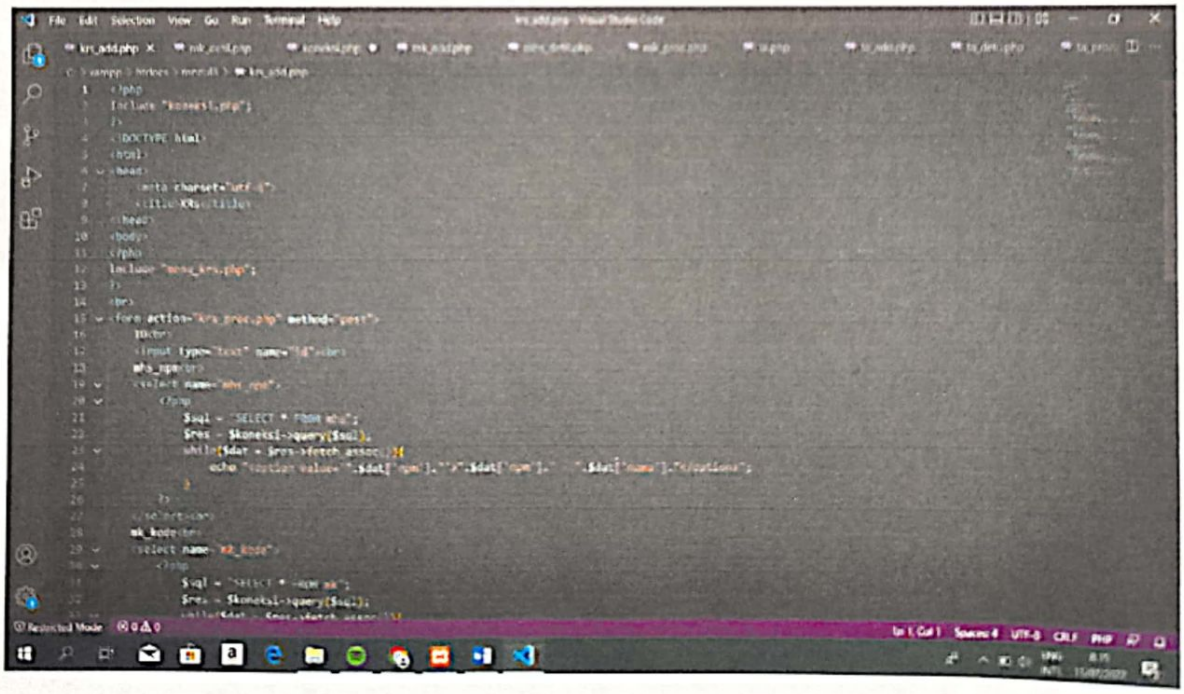
```php
<?php
Include "koneksi.php";
?>

<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>krs</title>
</head>
<body>
    <?php
      include "menu_krs.php";
    ?>
    <br>
    <?php
        $sql = "SELECT K.*,M.nama as m_nam, MK.kode as mk_kode, T.id as t_id
                FROM krs K
                JOIN mhs M ON K.mhs_npm = M.npm
                JOIN mk MK ON K.mk_kode = MK.kode
                JOIN ta T ON K.ta_id = T.id";
        $res = $koneksi->query($sql);
        $jum_data = $res->num_rows;

        echo "Ditemukan $jum_data data";
        echo "<table border='1' width='100%'>";
        echo "  <thead>
        <tr>
          <td width='5%'>No.</td>
          <th width='5%'>Act</th>
          <td width='5%'>ID</td>
```

```php
          <td width='5%'>No.</td>
          <th width='5%'>Act</th>
          <td width='5%'>ID</td>
          <td width='15%'>NPM</td>
          <td width='20%'>Mata Kuliah</td>
          <td width='20%'>Semester</td>
          <td width='20%'>Tahun Ajaran</td>
          <td width='20%'>Nilai</td>
        </tr>
      </thead
      <tbody>";

        $i = 0;
        while($dat = $res->fetch_array(MYSQLI_BOTH)){
            $i++;
            echo "<tr>
            <td align='center'>$i</td>
            <td><a href='krs_detil.php?id=".$dat['id'].." >Detil</a></td>
            <td>".$dat['id']."</a></td>
            <td>".$dat['mhs_npm']."</td>
            <td>".$dat['mk_kode']."</td>
            <td>".$dat['nama']."</td>
            <td>".$dat['ta_id']."</td>
            <td>".$dat['nilai']."</td>
        </tr>";
        }
        echo "  </tbody>
      </table>"
    ?>
</body>
</html>
```

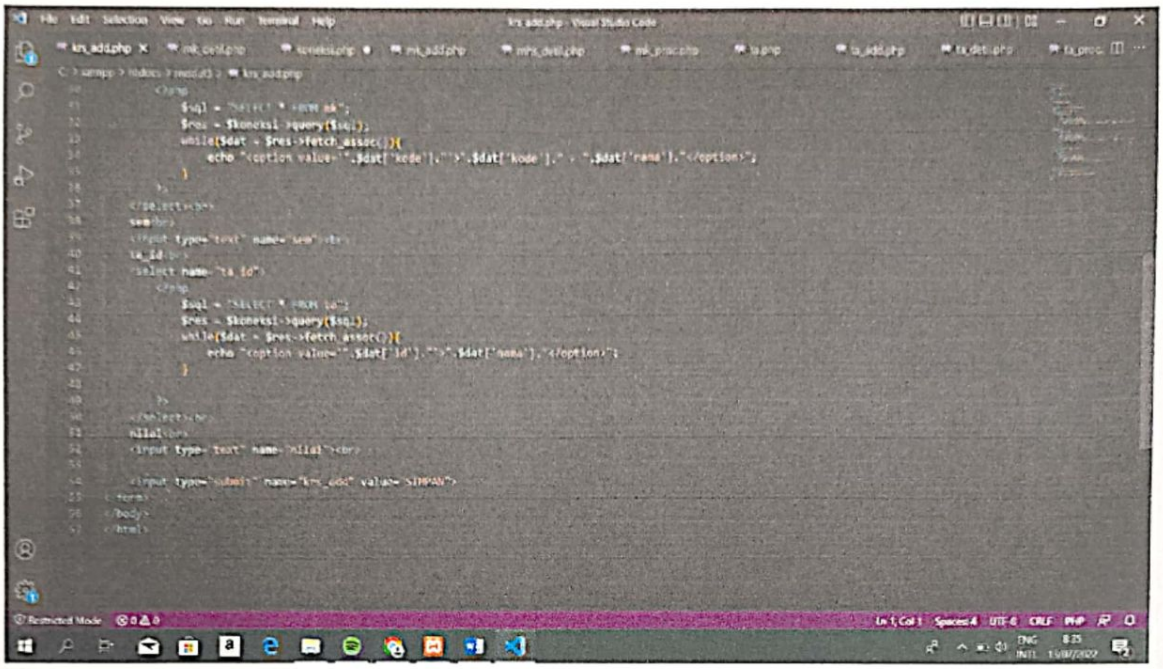
Dipindai dengan CamScanner

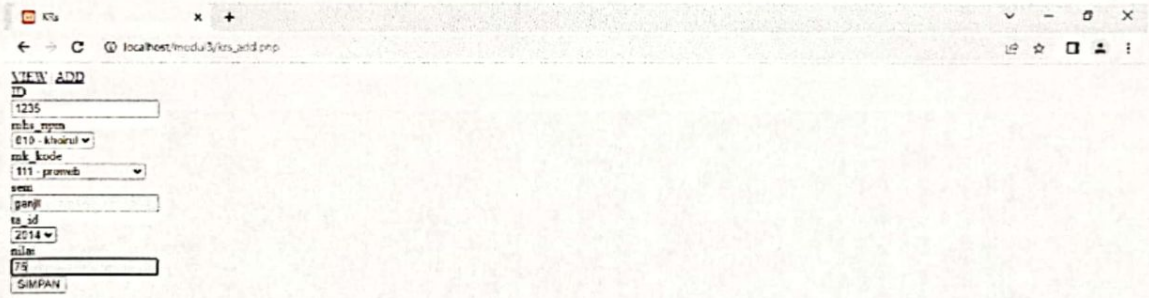



Krs_add.php




Dipindai dengan CamScanner



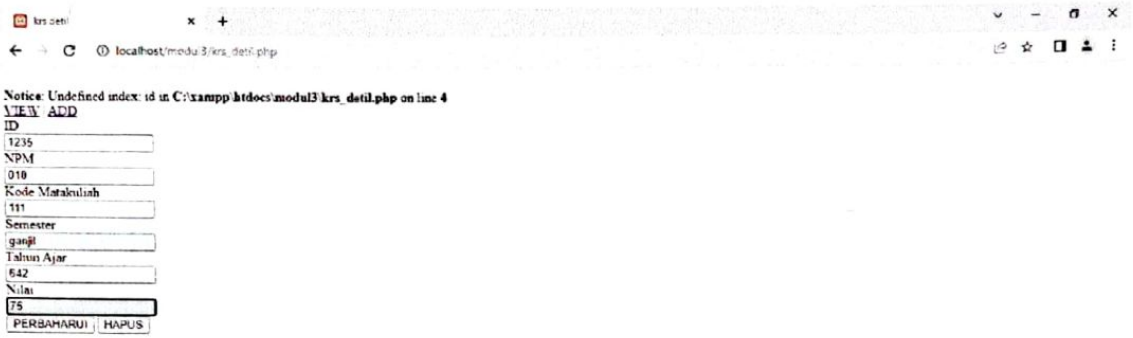

Dipindai dengan CamScanner

Krs_detil.php

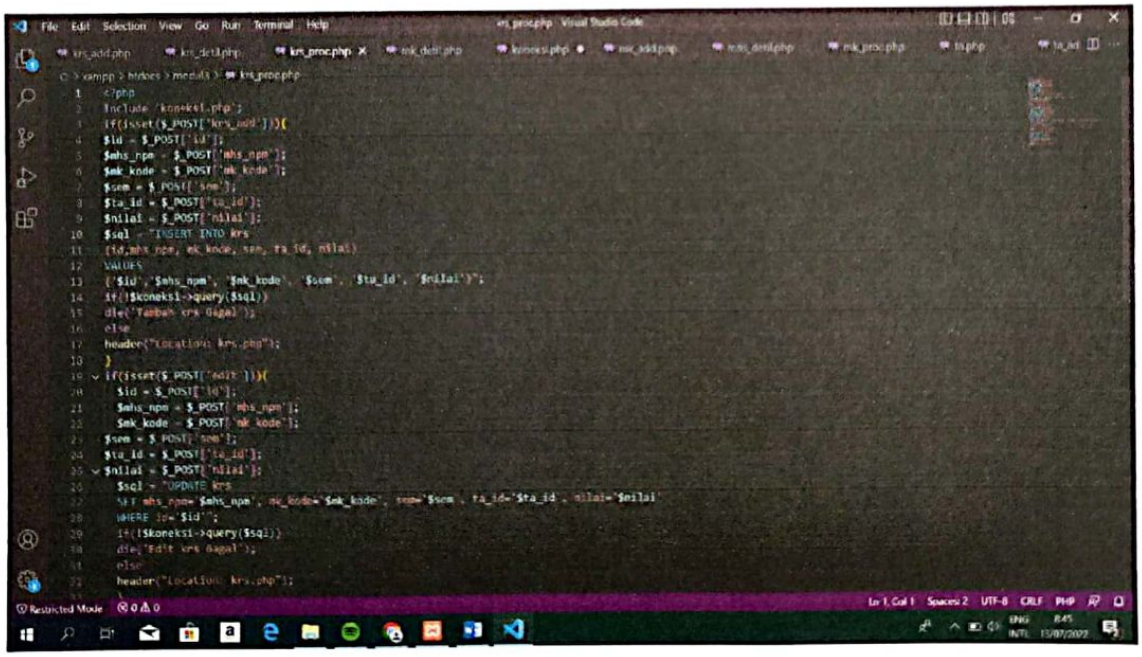
```php
<?php
Include "koneksi.php";

$id = $_GET['id'];
$sql = "SELECT * FROM krs WHERE id='$id'";
$res = $koneksi->query($sql);
$row = $res->fetch_array(MYSQLI_BOTH);
?>

<!DOCTYPE html>
<html>
<head>
    <meta charset="utf-8">
    <title>krs detil</title>
</head>
<body>
<?php
    include "menu_krs.php";
?>
<br>
<form action="krs_proc.php" method="post">
    ID<br>
    <input type="text" name="id" value="<?php echo $row['id']?>"><br>
    NPM<br>
    <input type="text" name="mhs_npm" value="<?= $row['mhs_npm']?>"><br>
    Kode Matakuliah<br>
    <input type="text" name="mk_kode" value="<?= $row['mk_kode']?>"><br>
    Semester<br>
    <input type="text" name="sem" value="<?= $row['sem']?>"><br>
    Tahun Ajar<br>
    <input type="text" name="ta_id" value="<?= $row['ta_id']?>"><br>
  Nilai<br>
  <input type="text" name="nilai" value="<?= $row['nilai']?>"><br>
```

```php
<br>
<form action="krs_proc.php" method="post">
    ID<br>
    <input type="text" name="id" value="<?php echo $row['id']?>"><br>
    NPM<br>
    <input type="text" name="mhs_npm" value="<?= $row['mhs_npm']?>"><br>
    Kode Matakuliah<br>
    <input type="text" name="mk_kode" value="<?= $row['mk_kode']?>"><br>
    Semester<br>
    <input type="text" name="sem" value="<?= $row['sem']?>"><br>
    Tahun Ajar<br>
    <input type="text" name="ta_id" value="<?= $row['ta_id']?>"><br>
  Nilai<br>
  <input type="text" name="nilai" value="<?= $row['nilai']?>"><br>
    <input type="submit" name="edit" value="PERBAHARUI">
    <input type="submit" name="hapus" value="HAPUS" onclick="return confirm('Yakin Menghapus Data Ini?')">
</form>
</body>
</html>
```

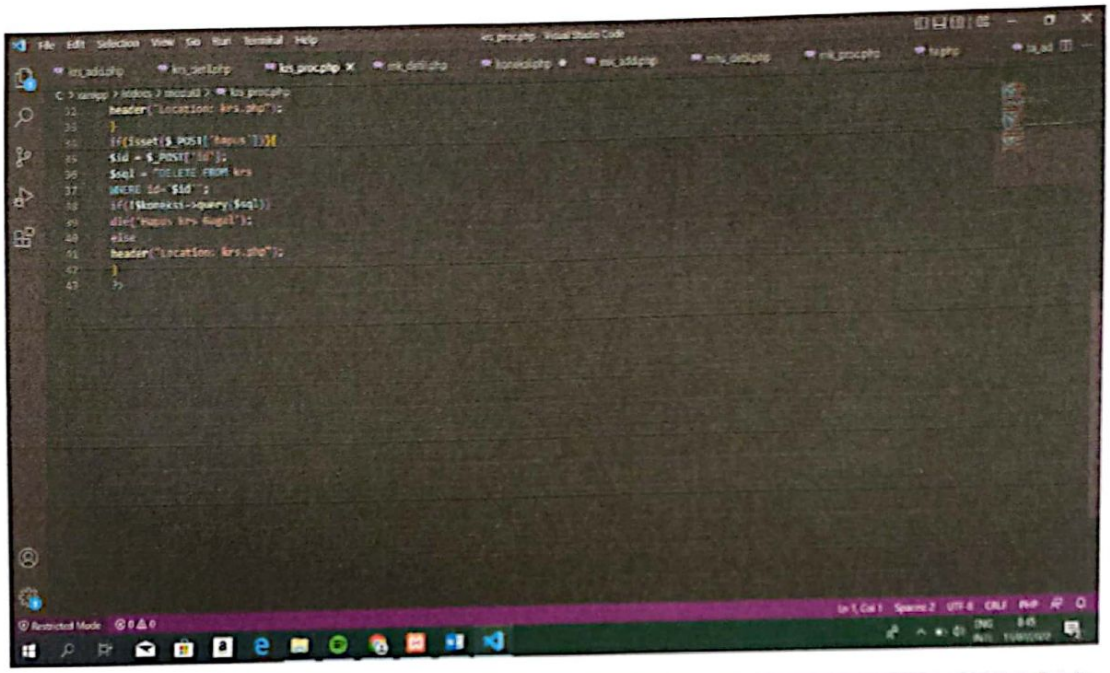
Dipindai dengan CamScanner




## Krs_proc.php




Dipindai dengan CamScanner



Dipindai dengan CamScanner

# BAB IV

# KESIMPULAN

Mysql API digunakan untuk berkomunikasi dengan database mysql melalui php.

Sintak yang digunakan untuk menampilkan, menambah, mengedit dan menghapus data pada data mahasiswa dapat di implementasikan untuk tabel lain dengan sedikit merubah sintaks mengikuti data yang diinginkan. koneksi hanya dibuat sekali dan di includekan pada yang lainnya.

Dan bertujuan mahasiswa mampu menjelaskan prinsip koneksi PHP dan mysql dapat membuat program untuk mengakses database mysql dengan menggunakan PHP, dapat membuat program CRUD sederhana.

Dipindai dengan CamScanner