Laporan Tugas Pemrograman Web Lanjut

Dosen Pengampu : **AJIB SUSANTO, M.Kom**

Tanggal Pertemuan : 5 Maret 2025

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Mata Kuliah : Pemrograman Web Lanjut

Topik :

OOP – Object Oriented Programming Using PHP Language

Tabel Deskripsi :

Pertemuan	Isi Laporan
2	Dokumentasi hasil
	Source Code

Dokumentasi Hasil

Umur dihitung dengan rumus:
array(5) { ["nim"]=> string(14) "A11.2023.12345" ["nama"]=> string(21) "Aprilyani Nur Safitri" ["tgl_lahir"]=> string(10) "2000-01-17" ["umur"]=> int(25) ["status"]=> string(5) "Aktif" }

Nilai umur diberi langsung:
int(100) array(5) { ["nim"]=> string(14) "A11.2023.12345" ["nama"]=> string(21) "Aprilyani Nur Safitri" ["tgl_lahir"]=> string(10) "2000-01-17" ["umur"]=> int(100) ["status"]=> string(5) "Aktif" }

```
Array
(
    [nim] => A11.2023.12345
    [nama] => Aprilyani Nur Safitri
    [tgl_lahir] => 2000-01-17
    [umur] => 25
    [status] => Aktif
    [daftar_nilai] => Array
        (
            [A22.123] => Array
                (
                    [sks] => 2
                    [nilai] => A
                )

            [A22.456] => Array
                (
                    [sks] => 3
                    [nilai] => B
                )

            [A22.789] => Array
                (
                    [sks] => 2
                    [nilai] => C
                )

        )

    [ipk] => 3
)
```

index.php

```php
<?php

include "Mahasiswa.php";
include "Matakuliah.php";


$mahasiswa_1 = new Mahasiswa();
$makul_1 = new MataKuliah();


$mahasiswa_1->setData("A11.2023.12345", "Aprilyani Nur Safitri", "2000-01-17");


echo "Umur dihitung dengan rumus: <br> ";
var_dump($mahasiswa_1->getData());
echo "<br>";
echo "<br> Nilai umur diberi langsung: <br>";
$mahasiswa_1->umur = 100;
var_dump($mahasiswa_1->umur);
var_dump($mahasiswa_1->getData());
```

index2.php

```php
<?php
include "Mahasiswa.php";
include "MahasiswaTransfer.php";

$daftar_nilai = [
    "A22.123" => ['sks' => 2, 'nilai' => 'A'],
    "A22.456" => ['sks' => 3,  'nilai' => 'B'],
    "A22.789" => ['sks' => 2, 'nilai' => 'C'],
];

$mahasiswa_1 = new MahasiswaTransfer($daftar_nilai);

$mahasiswa_1->setData("A11.2023.12345", "Aprilyani Nur Safitri", "2000-01-17");

echo "<pre>";
print_r($mahasiswa_1->getData());
echo "</pre>";
```

mahasiswa.php (class mahasiswa)

```php
<?php
class Mahasiswa
{
    private $nim;
    private $nama;
    private $tgl_lahir;
    public $status;
    public $umur;

    public function __construct()
    {
        $this->status = 'Aktif';
    }

    public function setData($nim, $nama, $tgl_lahir)
    {
        $this->nim = $nim;
        $this->nama = $nama;
        $this->tgl_lahir = $tgl_lahir;
        $this->setUmur();
    }

    public function setUmur()
    {
        $this->umur =  date("Y") -  substr($this->tgl_lahir, 0, 4);
    }

    public function getData()
    {
        return [
            "nim" => $this->nim,
            "nama" => $this->nama,
            "tgl_lahir" => $this->tgl_lahir,
            "umur" => $this->umur,
            "status" => $this->status
        ];
    }
}
```

mahasiswaTransfer.php (child dari class mahasiswa)

```php
<?php
class MahasiswaTransfer extends Mahasiswa
{
    private $daftar_nilai;
    private $ipk = 0, $tot_sks = 0, $jml_bobot = 0;
    private $bobot = ['A' => 4, 'B' =>3, 'C' => 2];

    public function __construct($daftar_nilai)
    {
        $this->daftar_nilai = $daftar_nilai;
        $this->getIPK();
        $this->status = 'Aktif';
    }

    public function getIPK()
    {
        if (!empty($this->daftar_nilai)) {
            foreach ($this->daftar_nilai as $data) {
                $this->tot_sks += $data['sks'];
                $this->jml_bobot += $data['sks'] * $this->bobot[$data['nilai']];
            }
        }

        $this->ipk = $this->jml_bobot / $this->tot_sks;

        return $this->ipk;
    }

    public function getData() {
        return array_merge(parent::getData(), ["daftar_nilai" => $this->daftar_nilai,
"ipk" => round($this->ipk, 2)]);
    }
}
```

MataKuliah.php (class MataKuliah)

```php
<?php
class MataKuliah{
    private $kode;
    public $nama;

    public function setData($kode, $nama){
        $this -> kode = $kode;
        $this -> nama = $nama;
    }
    public function getData(){
        return [$this->kode, $this->nama];
    }
}

?>
```