

LAPORAN PRAKTIKUM 4
(Overriding dan overloading)

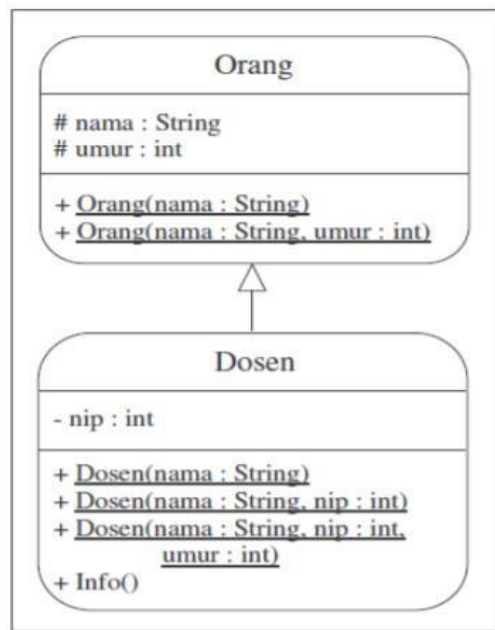


Oleh:

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PROGRAM STUDI D4 MANAJEMEN INFORMATIKA
FAKULTAS VOKASI
UNIVERSITAS NEGERI SURABAYA
2022

1. Buatlah Program berdasarkan UML dibawah ini



Codingan

- PHP

```
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• prak4 no1.php - Visual Studio Code

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prak4 no1.css prak4 no1.php

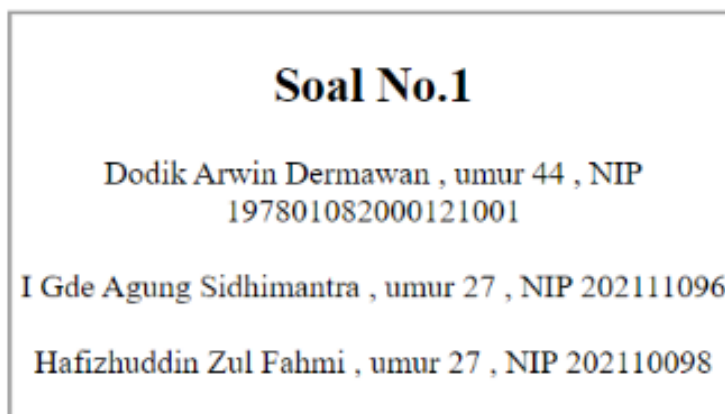
> Xampp > htdocs > PBO > Prak 4 > No 1 > prak4 no1.php
1 <!--Nama : Nur Haslinda
2 NIM : 21091397035 -->
3
4 <!DOCTYPE html>
5 <html lang="id">
6 <head>
7 <link rel="stylesheet" type="text/css" href="prak4 no1.css">
8 <title>Praktikum 4</title>
9 </head>
10 <body>
11 <div class="container">
12 <h2>Soal No.1</h2>
13 <?php
14 class Orang {
15     protected $nama,$umur;
16     public function __construct($nama,$umur){
17         $this->nama = $nama;
18         $this->umur = $umur;
19     }
20 }
21
22 class Dosen extends Orang {
23     private $nip;
24     public function __construct($nama, $umur, $nip) {
25         $this->nip = $nip;
26         parent::__construct($nama, $umur);
27     }
28
29     public function hasil() {
30         return $this->nama . ' , umur ' . $this->umur . ' , NIP ' . $this->nip;
31     }
32 }
33
```

```
File Edit Selection View Go Run Terminal Help • prak4 no1.php - Visual Studio Code
Restricted Mode is intended for safe code browsing. Trust this window to enable all features. Manage Learn More
# prak4 no1.css # prak4 no1.php
C: > Xampp > htdocs > PBO > Prak 4 > No 1 > prak4 no1.php
33
34     $dosen1 = new Dosen('Dodik Arwin Dermawan', 44, 197801082000121001);
35     $dosen2 = new Dosen('I Gde Agung Sri Sidhimantra', 27, 202111096 );
36     $dosen3 = new Dosen('Hafizhuddin Zul Fahmi', 27, 202110098);
37
38     echo $dosen1->hasil();
39     | echo '<br> <br>';
40     echo $dosen2->hasil();
41     | echo '<br> <br>';
42     echo $dosen3->hasil();
43     | echo '<br> <br>';
44     ?>
45 </div>
46 </body>
47 </html>
```

- CSS

```
File Edit Selection View Go Run Terminal Help prak4 no1.css - Visual S
Restricted Mode is intended for safe code browsing. Trust this window to enable all features. Manage Learn More
# prak4 no1.css X # prak4 no1.php
C: > Xampp > htdocs > PBO > Prak 4 > No 1 > # prak4 no1.css > body
1 body {
2     align-items: center;
3 }
4 h2{
5     text-align: center;
6 }
7
8 .container{
9     margin: auto;
10    text-align: center;
11    width: 350px;
12    border-style: groove;
13 }
```

- Output

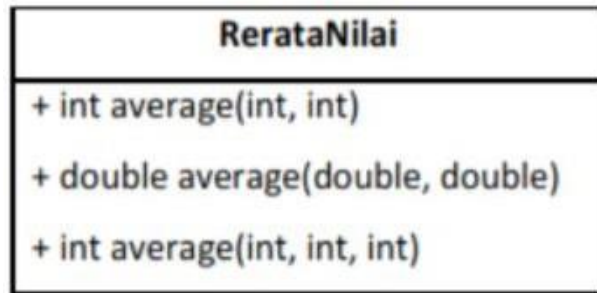


- Analisa

Program ini merupakan sebuah program dengan menggunakan metode pewarisan sifat. Hal ini dapat dibuktikan dengan dosen mesti memiliki identitas nama, umur, dan NIP. Ketika

kata orang dipanggil, output yang dihasilkan akan mengambil ke data dosen, karena dosen merupakan pewarisan sifat dari kata orang.

2. Buatlah Program berdasarkan UML dibawah ini



Codingan

- PHP

```
file Edit Selection View Go Run Terminal Help
prak4 no2.php - Visual Studio Code

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index no2.php # prak4 no2.css prak4 no2.php X
C: > Xampp > htdocs > PBO > Prak 4 > No 2 > prak4 no2.php

1 <!--Nama : Nur Haslinda
2 NIM : 21091397035-->
3
4 <?php
5
6 class RerataNilai {
7     protected $value, $value2;
8     public function __construct($value, $value2){
9         $this->value = $value;
10        $this->value2 = $value2;
11    }
12
13    public function average($value3 = 0){
14        if ($value3 == 0) {
15            $str = $this->value . ' + ' . $this->value2 . ' / 2 = ';
16            return $str . ($this->value += $this->value2 ) / 2;
17        } else {
18            $str = '(' . $this->value . ' + ' . $this->value2 . ' + ' . $this->value2 . ' ) / 3 = ';
19            return $str . ($this->value += $this->value2 += $value3 ) / 3;
20        }
21    }
22 }
23
24
25
26 class RerataNilai2 extends RerataNilai{
27     public function __construct($value, $value2){
28         parent::__construct($value, $value2);
29     }
30
31     public function average($value3 = 0){
32         return parent::average($value3);
33     }
34 }
35
36 ?>
```

```
file Edit Selection View Go Run Terminal Help index no2.php - Visual Studio Code
stricted Mode is intended for safe code browsing. Trust this window to enable all features. Manage Learn More
index no2.php x # prak4 no2.css prak4 no2.php
C: > Xampp > htdocs > PBO > Prak 4 > No 2 > index no2.php
1 <!--Nama : Nur Haslinda
2 NIM : 21091397035-->
3
4 <?php
5 | require_once 'prak4 no2.php';
6 ?>
7
8 <html lang="id">
9 <head>
10 | <link rel="stylesheet" href="prak4 no2.css">
11 | <title>Praktikum 4</title>
12 </head>
13 <body>
14 <div class="container">
15 <h2>Soal No.2</h2>
16 <div class="form">
17 | <form action="" method="post">
18 | | <input type="number" name="input1">
19 | | <input type="number" name="input2">
20 | | <input type="number" name="input3">
21 | | <button type="submit" name="submit">Submit</button>
22 | </form>
23 | </div>
24
25 | <?php
26 | | if (isset($_POST['submit'])) {
27 | | | if (!isset($_POST['input3'])) {
28 | | | | $value1 = new RerataNilai2($_POST['input1'], $_POST['input2']);
29 | | | | echo $value1->average(0);
30 | | | } else {
31 | | | | $value1 = new RerataNilai2($_POST['input1'], $_POST['input2']);
32 | | | | echo $value1->average($_POST['input3']);
33 | | | }
34 | | }
35 | }
36 </div>
```

```
37 </body>
38 </html>
```

- CSS

```
file Edit Selection View Go Run Terminal Help prak4 no2.css - Visual Studio Code
stricted Mode is intended for safe code browsing. Trust this window to enable all features. Manage Learn More
index no2.php # prak4 no2.css x prak4 no2.php
C: > Xampp > htdocs > PBO > Prak 4 > No 2 > # prak4 no2.css > .container
1 .container {
2 | margin: auto;
3 | text-align: center;
4 | width: 650px;
5 | height: 150px;
6 | border-style: groove;
7 }
```

- Output

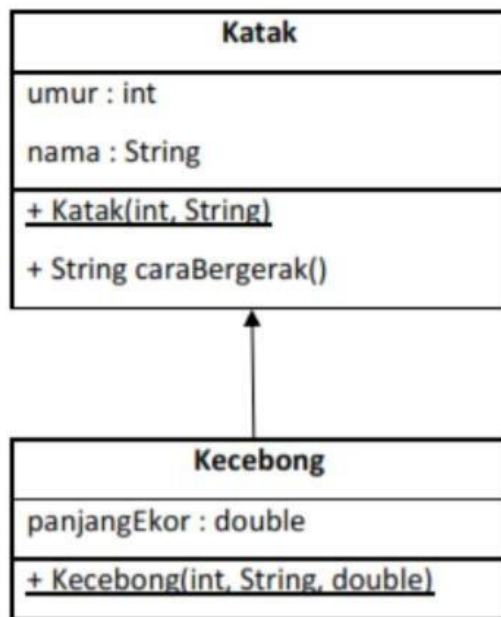
Soal No.2

$(6 + 6 + 6) / 3 = 4.6666666666667$

- Analisa

Program diatas merupakan program yang menggunakan metode pewarisa sifat. Hal ini dibuktikan dengan program dengan nama method boleh Sama, akan tetapi Jumlah parameter mesti berbeda nilai yang di Return harus mempunyai tipe yang sama.

3. Buatlah Program berdasarkan UML dibawah ini



Codingan

- PHP

```

1  <!--Nama : Nur Haslinda
2  NIM : 21091397035-->
3
4  <?php
5
6  class Katak{
7      protected $umur, $nama;
8      public function __construct($umur, $nama){
9          $this->umur = $umur;
10         $this->nama = $nama;
11     }
12     public function getUmur(){
13         return $this->umur;
14     }
15     public function getNama(){
16         return $this->nama;
17     }
18     public function caraBergerak(){
19         return 'Melompat';
20     }
21 }
22
23 class Kecebong extends Katak{
24     private $panjangEkor;
25     public function __construct($umur, $nama, $ekor){
26         $this->panjangEkor = $ekor;
27         parent::__construct($umur, $nama);
28     }
29     public function getpanjangekor(){
30         return $this->panjangEkor;
31     }
32     public function carabergerak(){
33         return 'Berenang';
34     }
35 }
36
  
```

```

37 $katak = new katak(5, 'Froggy');
38 $kecebong = new kecebong(5, 'Junior Froggy', 10);
39
40 ?>

```

```

File Edit Selection View Go Run Terminal Help index no3.php - Visual Studio Code
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index no3.php X # prak4 no3.css prak4 no3.php
C: > Xampp > htdocs > PBO > Prak 4 > No 3 > index no3.php

1 <!-- Nama : Nur Haslinda
2 | NIM : 21091397035-->
3
4 <?php
5 | require_once 'prak4 no3.php';
6 ?>
7
8 <html lang="id">
9 <head>
10 | <link rel="stylesheet" type="text/css" href="prak4 no3.css">
11 | <title>Praktikum 4</title>
12 </head>
13 <body>
14 <h2><center>Soal No.3</center></h2>
15 <table align="center">
16
17 <tr align="center">
18 | <thead>
19 | <td>Objek</td>
20 | <td>Umur</td>
21 | <td>Nama</td>
22 | <td>Panjang Ekor</td>
23 | <td>Cara Bergerak</td>
24 | </thead>
25 </tr>
26
27 <tbody>
28 <tr>
29 | <td>01</td>
30 | <td><?=$katak->getUmur() ?> </td>
31 | <td><?=$katak->getNama() ?> </td>
32 | <td>-</td>
33 | <td><?=$katak->carabergak() ?> </td>
34 </tr>
35

```

```

36 <tr>
37 | <td>02</td>
38 | <td><?=$kecebong->getUmur() ?> </td>
39 | <td><?=$kecebong->getNama() ?> </td>
40 | <td><?=$kecebong->getpanjangekor() ?> </td>
41 | <td><?=$kecebong->carabergak() ?> </td>
42 </tr>
43 </tbody>
44
45 </table>
46 </body>
47 </html>

```

- CSS

```

File Edit Selection View Go Run Terminal Help
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index no3.php # prak4 no3.css X prak4 no3.php
C: > Xampp > htdocs > PBO > Prak 4 > No 3 > # prak4 no3.css > h2

1 h2{
2 | margin: auto;
3 | text-align: center;
4 | padding-bottom: 10px;
5 }
6
7 .table{
8 | margin: auto;
9 | font-family: sans-serif;
10 | border-collapse: collapse;
11 }
12
13 .table, td{
14 | border: 1px solid;
15 | padding: 8px 10px;
16 }
17
18 thead{
19 | font-weight: bold;
20 }

```

- Output

Soal No.3

Objek	Umur	Nama	Panjang Ekor	Cara Bergerak
01	5	Froggy	-	Melompat
02	5	Junior Froggy	10	Berenang

- Analisa

Program diatas merupakan program yang menggunakan metode pewarisan. Akan tetapi karena satu dan lain hal maka pewarisan sifat tidak dapat diterapkan. Hal ini dibuktikan dengan study kasus diatas, yaitu Ketika froggy dan junior froggi sama-sama memiliki umur lima, froggy tidak memiliki ekor dan cara Bergeraknya dengan melompat, sedangkan junior froggy memiliki Panjang ekor 10 dan cara Bergeraknya dengan berenang.