

LAPORAN PRAKTIKUM 5

Kuliah Pemograman Berorientasi Obyek



Oleh :

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PROGRAM STUDI D4 MANAJEMEN INFORMATIKA

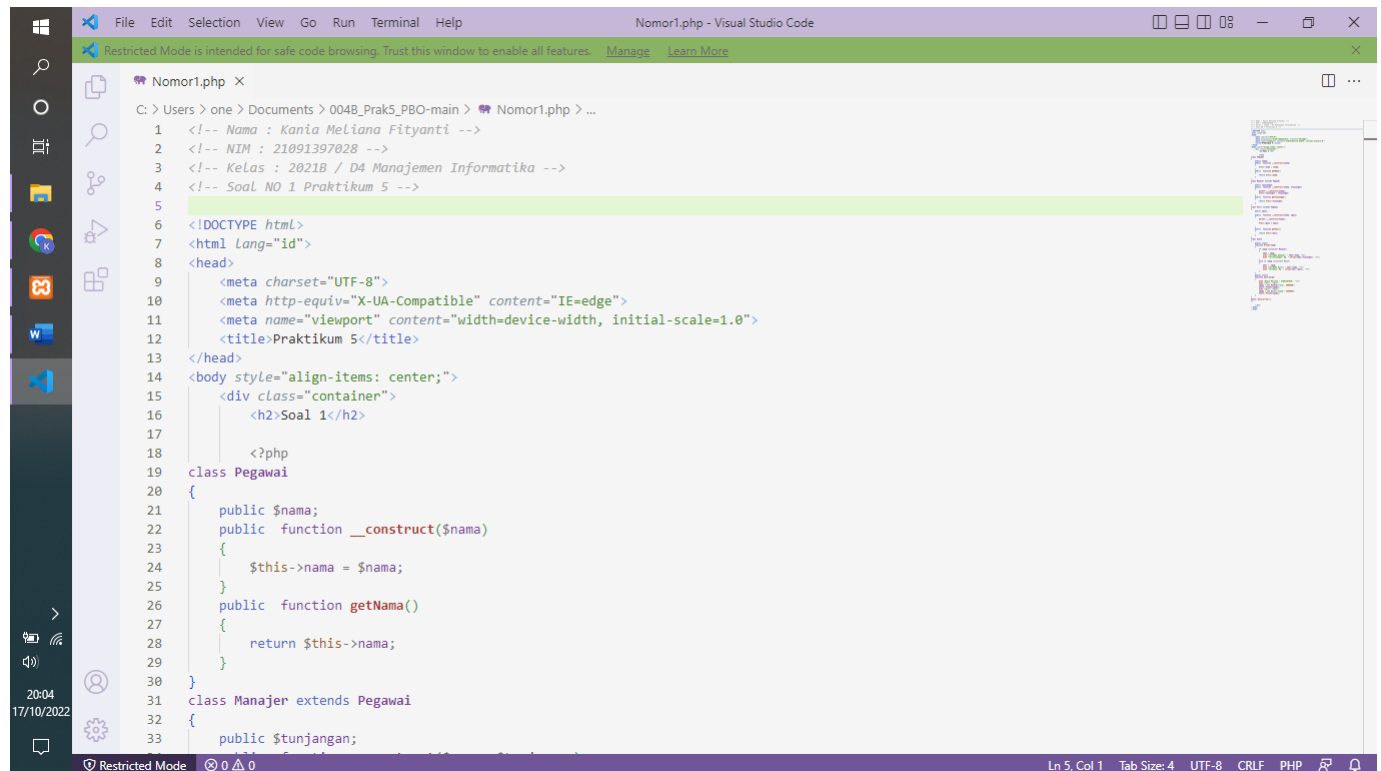
FAKULTAS VOKASI

2022

1.

Suatu program terdiri dari class Pegawai sebagai parent class, class Manajer dan class Kurir sebagai subclass. Buatlah suatu program yang menerapkan konsep polymorphic argument (Polymorphic arguments adalah tipe suatu parameter yang menerima suatu nilai yang bertipe subclass-nya)

Source Code



```
1  <!-- Nama : Kania Meliana Fityanti -->
2  <!-- NIM : 21091397028 -->
3  <!-- Kelas : 2021B / D4 Manajemen Informatika -->
4  <!-- Soal NO 1 Praktikum 5 -->
5
6  <!DOCTYPE html>
7  <html Lang="id">
8  <head>
9      <meta charset="UTF-8">
10     <meta http-equiv="X-UA-Compatible" content="IE=edge">
11     <meta name="viewport" content="width=device-width, initial-scale=1.0">
12     <title>Praktikum 5</title>
13 </head>
14 <body style="align-items: center;">
15     <div class="container">
16         <h2>Soal 1</h2>
17     </div>
18     <?php
19     class Pegawai
20     {
21         public $nama;
22         public function __construct($nama)
23         {
24             $this->nama = $nama;
25         }
26         public function getNama()
27         {
28             return $this->nama;
29         }
30     }
31     class Manajer extends Pegawai
32     {
33         public $tunjangan;
```

```
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Nomor1.php - Visual Studio Code
Restricted Mode is intended for safe code browsing. Trust this window to enable all features. Manage Learn More

Nomor1.php X
C:\Users> one > Documents > 004B_Prak5_PBO-main > Nomor1.php > ...

44 class Kurir extends Pegawai
45 {
46     public $gaji;
47
48     public function __construct($nama, $gaji)
49     {
50         parent::__construct($nama);
51
52         $this->gaji = $gaji;
53     }
54
55     public function getGaji()
56     {
57         return $this->gaji;
58     }
59 }
60 class Soal1
61 {
62     public static
63     function Proses($peg)
64     {
65         if ($peg instanceof Manajer)
66         {
67             $man = $peg;
68             echo "<br>Nama manajer: ".$man->nama, "\n";
69             echo "<br>Tunjangan: Rp. ".strval($man->tunjangan), "\n";
70         }
71         else if ($peg instanceof Kurir)
72         {
73             $kur = $peg;
74             echo "<br>Nama kurir: ".$kur->nama, "\n";
75             echo "<br>Gaji: Rp. ".strval($kur->gaji), "\n";
76         }
77     }
78 }
79
80 public static
81 function main($args)
82 {
83     echo "Kania Meliana - 21091397028", "\n";
84     echo "<br>", "<br>";
85     $peg1 = new Manajer("Ica", 8000000);
86     Soal1::Proses($peg1);
87     echo "<br>", "<br>";
88     $peg2 = new Kurir("Liana", 6500000);
89     Soal1::Proses($peg2);
90 }
91
92 Soal1::main(array());
93
94 ?>
95
96 </div>
97 </body>
98 </html>
```

```
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Nomor1.php - Visual Studio Code
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Nomor1.php X
C:\Users> one > Documents > 004B_Prak5_PBO-main > Nomor1.php > ...

65 if ($peg instanceof Manajer)
66 {
67     $man = $peg;
68     echo "<br>Nama manajer: ".$man->nama, "\n";
69     echo "<br>Tunjangan: Rp. ".strval($man->tunjangan), "\n";
70 }
71 else if ($peg instanceof Kurir)
72 {
73     $kur = $peg;
74     echo "<br>Nama kurir: ".$kur->nama, "\n";
75     echo "<br>Gaji: Rp. ".strval($kur->gaji), "\n";
76 }
77 }
78 public static
79 function main($args)
80 {
81     echo "Kania Meliana - 21091397028", "\n";
82     echo "<br>", "<br>";
83     $peg1 = new Manajer("Ica", 8000000);
84     Soal1::Proses($peg1);
85     echo "<br>", "<br>";
86     $peg2 = new Kurir("Liana", 6500000);
87     Soal1::Proses($peg2);
88 }
89
90 Soal1::main(array());
91
92 ?>
93
94 </div>
95 </body>
96 </html>
```

✚ Output

Soal 1

Kania Meliana - 21091397028

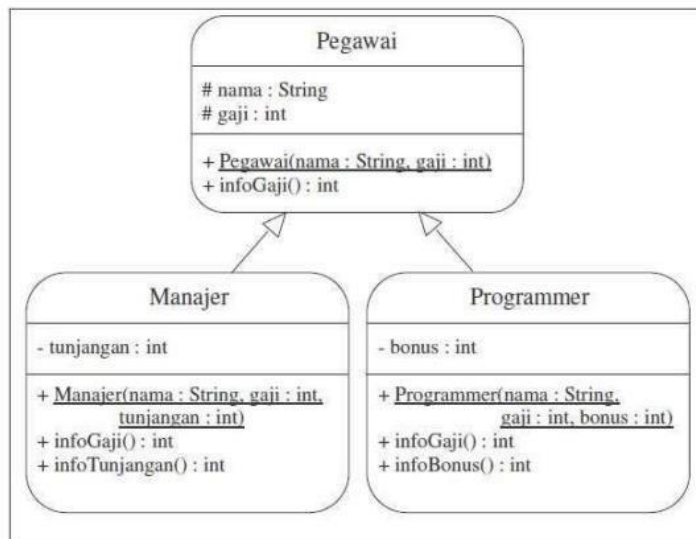
Nama manajer: Ica
Tunjangan: Rp. 8000000

Nama kurir: Liana
Gaji: Rp. 6500000

✚ Analisa

Pada kasus yang terdapat pada soal diatas implementasi dari polymorphic argument berada di class info dimana method info dibuat static agar pemanggilannya tidak memerlukan diinisiasi, sehingga bisa langsung dimasukkan menjadi parameter pada method info di class info.

2. Buatlah program berdasarkan UML berikut



Source Code

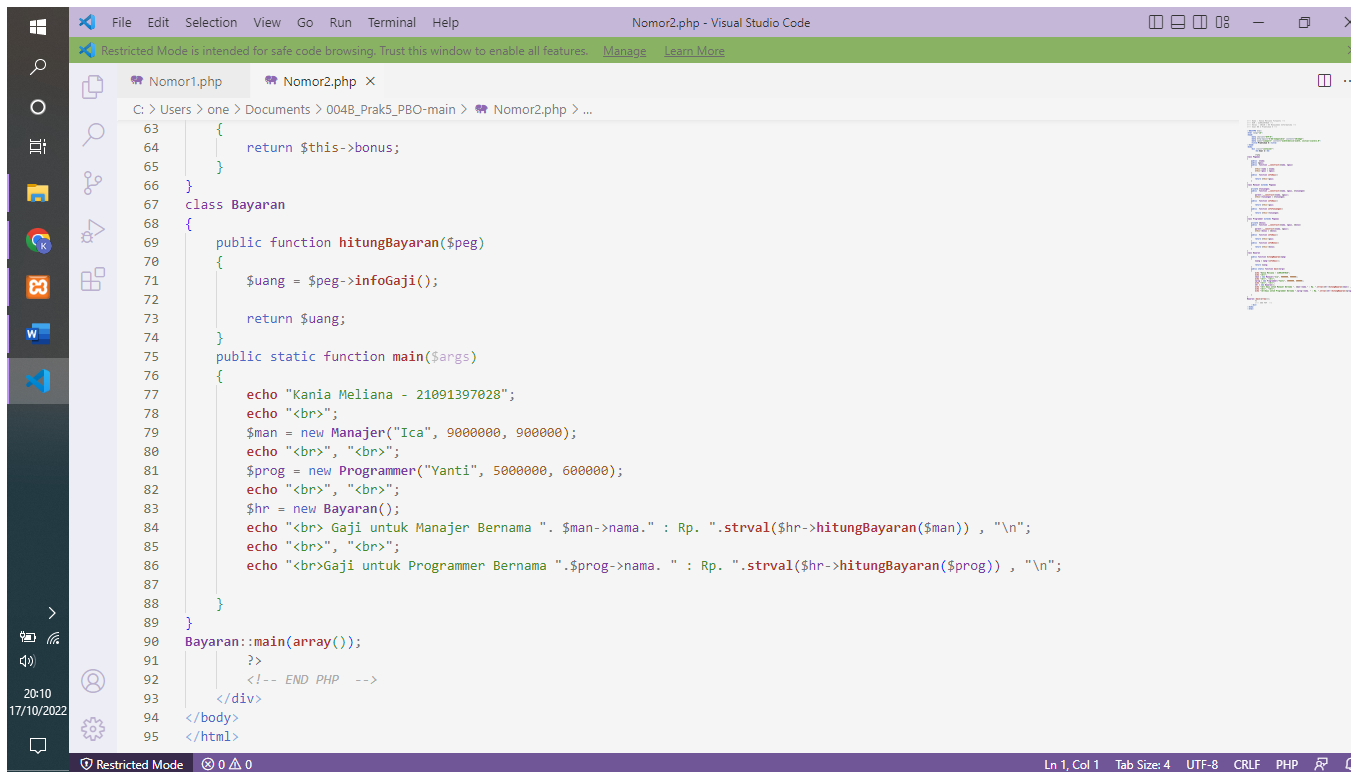
✚ PHP

```
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Nomor1.php Nomor2.php X
C:\Users> one > Documents > 004B_Prak5_PBO-main > Nomor2.php > ...
1 <!-- Nama : Kania Meliana Fityanti -->
2 <!-- NIM : 21091397028 -->
3 <!-- Kelas : 2021B / D4 Manajemen Informatika -->
4 <!-- Soal NO 2 Praktikum 5 -->
5
6 <!DOCTYPE html>
7 <html Lang="id">
8 <head>
9     <meta charset="UTF-8">
10    <meta http-equiv="X-UA-Compatible" content="IE=edge">
11    <meta name="viewport" content="width=device-width, initial-scale=1.0">
12    <title>Praktikum 5</title>
13 </head>
14 <body>
15     <div class="container">
16         <h2>Soal 2</h2>
17     </div>
18     <?php
19     class Pegawai
20     {
21         public $nama;
22         public $gaji;
23         public function __construct($nama, $gaji)
24         {
25             $this->nama = $nama;
26             $this->gaji = $gaji;
27         }
28         public function infoGaji()
29         {
30             return $this->gaji;
31         }
32     }
33     class Manajer extends Pegawai
```

```
File Edit Selection View Go Run Terminal Help
Nomor2.php - Visual Studio Code
Restricted Mode is intended for safe code browsing. Trust this window to enable all features. Manage Learn More

Nomor1.php Nomor2.php X
C:\Users> one > Documents > 004B_Prak5_PBO-main > Nomor2.php > ...
32 }
33 class Manajer extends Pegawai
34 {
35     private $tunjangan;
36     public function __construct($nama, $gaji, $tunjangan)
37     {
38         parent::__construct($nama, $gaji);
39         $this->tunjangan = $tunjangan;
40     }
41     public function infoGaji()
42     {
43         return $this->gaji;
44     }
45     public function infoTunjangan()
46     {
47         return $this->tunjangan;
48     }
49 }
50 class Programmer extends Pegawai
51 {
52     private $bonus;
53     public function __construct($nama, $gaji, $bonus)
54     {
55         parent::__construct($nama, $gaji);
56         $this->bonus = $bonus;
57     }
58     public function infoGaji()
59     {
60         return $this->gaji;
61     }
62     public function infoBonus()
63     {
64         return $this->bonus;
65     }
66 }
```



```
63 {
64     return $this->bonus;
65 }
66 }
67 class Bayaran
68 {
69     public function hitungBayaran($peg)
70     {
71         $uang = $peg->infoGaji();
72         return $uang;
73     }
74     public static function main($args)
75     {
76         echo "Kania Meliana - 21091397028";
77         echo "<br>";
78         $man = new Manajer("Ica", 9000000, 9000000);
79         echo "<br>", "<br>";
80         $prog = new Programmer("Yanti", 5000000, 6000000);
81         echo "<br>", "<br>";
82         $hr = new Bayaran();
83         echo "<br> Gaji untuk Manajer Bernama ". $man->nama. " : Rp. ".strval($hr->hitungBayaran($man)) , "<br>";
84         echo "<br>", "<br>";
85         echo "<br>Gaji untuk Programmer Bernama ". $prog->nama. " : Rp. ".strval($hr->hitungBayaran($prog)) , "<br>";
86     }
87 }
88 }
89 }
90 Bayaran::main(array());
91 ?>
92 <!-- END PHP -->
93 </div>
94 </body>
95 </html>
```

Output

Soal 2

Kania Meliana - 21091397028

Gaji untuk Manajer Bernama Ica : Rp. 9000000

Gaji untuk Programmer Bernama Yanti : Rp. 5000000

Analisa

Program diatas adalah penerapan inheritance dengan konsep overriding, dimana pemanggilan construct di masing-masing class turunan hanya akan menginisiasi properti yang dimiliki dengan visibilitas private dan properti lain yang diturunkan akan langsung diinisiasi dengan construct dari parentnya