

**LAPORAN PEMROGRAMAN BERORIENTASI OBJEK  
UJIAN TENGAH SEMESTER**



Disusun oleh :

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**PROGRAM STUDI D4 MANAJEMEN INFORMATIKA  
FAKULTAS VOKASI  
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1. Buatlah Program berdasarkan UML dibawah ini

- Kodingan :

```
C:\> xampp > htdocs > UTS PBO > Praktikum 5 > 011_Praktikum05_1.php > ...
1  <!-- Muvridha Fatmawati Putri (21091397011) -->
2
3
4  <!DOCTYPE html>
5  <html lang="id">
6  <head>
7      <meta charset="UTF-8">
8      <meta http-equiv="X-UA-Compatible" content="IE=edge">
9      <meta name="viewport" content="width=device-width, initial-scale=1.0">
10     <title>Praktikum 5</title>
11 </head>
12 <body style="align-items: center;">
13     <div class="container">
14         <h2>Soal 1</h2>
15     </div>
16     <?php
17     8 references | 4 implementations
18     class Pegawai
19     {
20         7 references
21         public $nama;
22         4 references | 4 overrides
23         public function __construct($nama)
24         {
25             $this->nama = $nama;
26         }
27         0 references | 0 overrides
28         public function getName()
29         {
30             return $this->nama;
31         }
32     }
33     3 references | 0 implementations
34     class Manajer extends Pegawai
35     {
36         5 references
37         public $tunjangan;
38         6 references | 0 overrides | prototype
39         public function __construct($nama, $tunjangan)
40         {
41             parent::__construct($nama);
42             $this->tunjangan = $tunjangan;
43         }
44         0 references | 0 overrides
45         public function getTunjangan()
46         {
47             return $this->tunjangan;
48         }
49     }
50     2 references | 0 implementations
51     class Kurir extends Pegawai
52     {
53         7 references
54         public $gaji;
55         5 references | 0 overrides | prototype
56         public function __construct($nama, $gaji)
57         {
58             parent::__construct($nama);
59             $this->gaji = $gaji;
60         }
61         0 references | 0 overrides
62         public function getGaji()
63         {
64             return $this->gaji;
65         }
66     }
67 }
```

```

54     {
55         return $this->gaji;
56     }
57 }
58 3 references | 0 implementations
59 class Soal1
60 {
61     2 references | 0 overrides
62     public static
63     function Proses($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($kur->gaji), "\n";
76         }
77     }
78     1 reference | 0 overrides
79     public static
80     function main($args)
81     {
82         echo "Muvidha FP. - 21091397011", "\n";
83         echo "<br>", "<br>";
84         $peg1 = new Manajer("Budi", 2500000);
85         Soal1::Proses($peg1);
86         echo "<br>", "<br>";
87         $peg2 = new Kurir("Candra", 10000000);
88         Soal1::Proses($peg2);
89     }
90 }
91 Soal1::main(array());
92 ?>
93 </div>
94 </body>
95 </html>

```

- Output :

#### Soal 1

Muvidha FP. - 21091397011

Nama manajer: Budi  
Tunjangan: Rp. 2500000

Nama kurir: Candra  
Gaji: Rp. 10000000

- Penjelasan :

Dalam kasus diatas implementasi dari polymorphic argument berada di class info dimana methodinfo dibuat static supaya pemanggilannya tidak perlu diinisiasi, sehingga bisa langsung dimasukkan menjadi parameter pada method info di class info.

## 2. Buatlah Program berdasarkan UML dibawah ini

- Kodingan :

```
C:\> xampp >htdocs > UTS PBO > Praktikum 5 > 011_Praktikum05_2.php > ...
1  <!-- Muvidha Fatmawati Putri (21091397011) -->
2
3  <!DOCTYPE html>
4  <html lang="id">
5  <head>
6      <meta charset="UTF-8">
7      <meta http-equiv="X-UA-Compatible" content="IE=edge">
8      <meta name="viewport" content="width=device-width, initial-scale=1.0">
9      <title>Praktikum 5</title>
10 </head>
11 <body>
12     <div class="container">
13         <h2>Soal 2</h2>
14
15         <?php
16             8 references | 4 implementations
17             class Pegawai
18             {
19                 7 references
20                 public $nama;
21                 7 references
22                 public $gaji;
23                 4 references | 4 overrides
24                 public function __construct($nama, $gaji)
25                 {
26                     $this->nama = $nama;
27                     $this->gaji = $gaji;
28                 }
29             }
30             3 references | 0 implementations
31             class Manajer extends Pegawai
32             {
33                 5 references
34                 private $tunjangan;
35                 6 references | 0 overrides | prototype
36                 public function __construct($nama, $gaji, $tunjangan)
37                 {
38                     parent::__construct($nama, $gaji);
39                     $this->tunjangan = $tunjangan;
40                 }
41                 1 reference | 0 overrides | prototype
42                 public function infoGaji()
43                 {
44                     return $this->gaji;
45                 }
46                 0 references | 0 overrides
47                 public function infoTunjangan()
48                 {
49                     return $this->tunjangan;
50                 }
51             }
52             1 reference | 0 implementations
53             class Programmer extends Pegawai
54             {
55                 2 references
56                 private $bonus;
57                 5 references | 0 overrides | prototype
58                 public function __construct($nama, $gaji, $bonus)
59                 {
60                     parent::__construct($nama, $gaji);
61                 }
62             }
63         }
64     }
65 }
66 </div>
67 </body>
68 </html>
```

```

53     $this->bonus = $bonus;
54 }
55 1 reference | 0 overrides | prototype
56 public function infoGaji()
57 {
58     return $this->gaji;
59 }
60 0 references | 0 overrides
61 public function infoBonus()
62 {
63     return $this->bonus;
64 }
65 2 references | 0 implementations
66 class Bayaran
67 {
68     2 references | 0 overrides
69     public function hitungBayaran($peg)
70     {
71         $uang = $peg->infoGaji();
72         return $uang;
73     }
74 1 reference | 0 overrides
75 public static function main($args)
76 {
77     echo "Muvidha FP. - 21091397011";
78     echo "<br>";
79     $man = new Manajer("Budi", 2500000, 250000);
80     echo "<br>", "<br>";
81     $prog = new Programmer("Candra", 20000000, 900000);
82     echo "<br>", "<br>";
83     $shr = new Bayaran();
84     echo "<br> Gaji untuk Manajer Bernama ". $man->nama. " : Rp. ".strval($shr->hitungBayaran($man)) , "<br>";
85     echo "<br>", "<br>";
86     echo "<br>Gaji untuk Programmer Bernama ". $prog->nama. " : Rp. ".strval($shr->hitungBayaran($prog)) , "<br>";
87 }
88 }
89 Bayaran::main(array());
90 }
91 <!-- END PHP -->
92 </div>
93 </body>
94 </html>

```

- Output :

#### Soal 2

Muvidha FP. - 21091397011

Gaji untuk Manajer Bernama Budi : Rp. 2500000

Gaji untuk Programmer Bernama Candra : Rp. 20000000

- Penjelasan :

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.