

Tugas Pemrograman Berorientasi Objek

Praktikum 3 INHERITANCE



Nama:

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21091397042

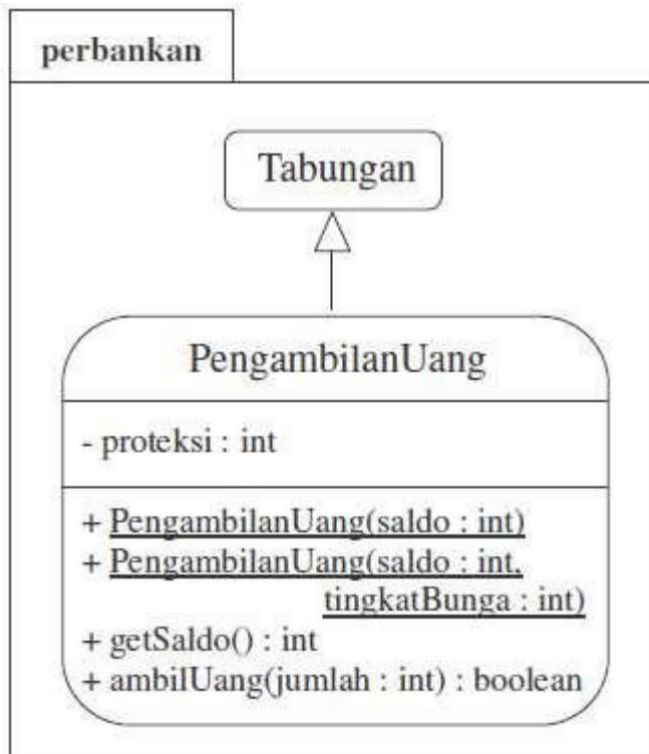
DIV MANAJEMEN INFORMATIKA

PROGRAM VOKASI

UNIVERSITAS NEGERI SURABAYA

TAHUN AJARAN 2021/2022

1. Transformasikan UML class diagram dibawah ini kedalam program



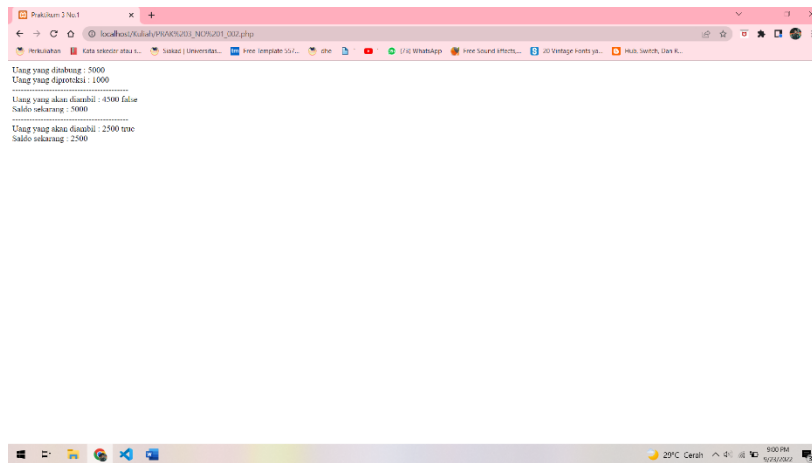
Pseudocode dari soal di atas adalah sebagai berikut:

```
File Edit Selection View Go Run Terminal Help
PRAK 3_NO 1_002.php - Kuliah - Visual Studio Code
Restricted Mode is intended for safe code browsing. Trust this folder to enable all features. Manage Learn More

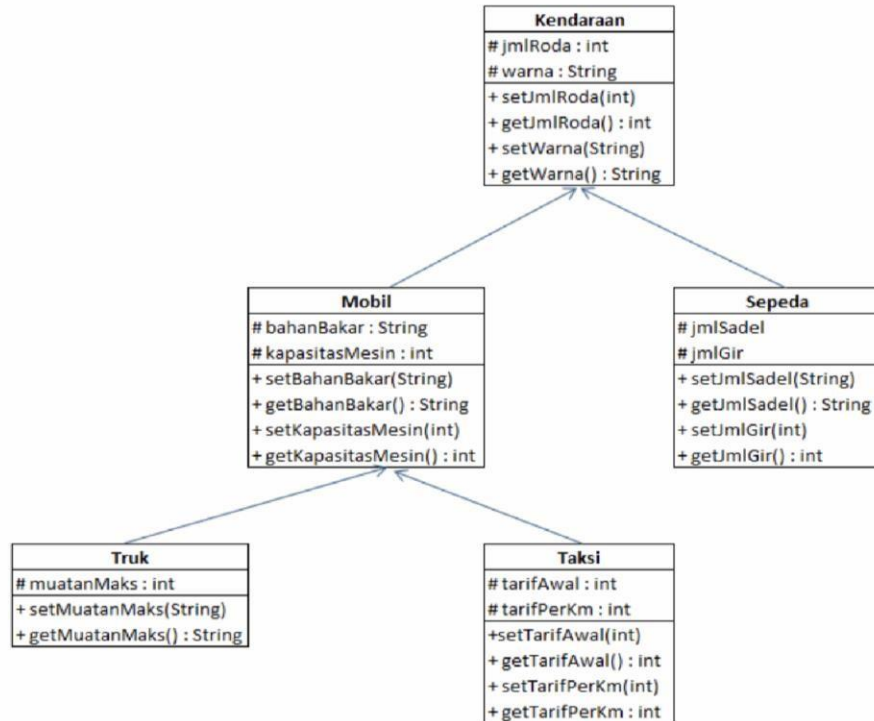
EXPLORER
PRAK 3_NO 1_002.php
PRAK 3_NO 1_002.php
PRAK 3_NO 2A_002.p...

PRAK 3_NO 1_002.php
10 <div class="container">
11 <?php
12 class Tabungan {
13     protected $saldo;
14 }
15 class PengambilanUang extends Tabungan {
16     private $proteksi;
17
18     public function __construct($saldo)
19     {
20         $this->saldo=$saldo;
21         $this->proteksi = 1000;
22     }
23
24     public function getSaldo(){
25         return "Uang yang ditabung : " . $this->saldo . "<br> Uang yang diproteksi : " . $this->proteksi;
26     }
27
28     public function ambilUang($jumlah){
29         if($jumlah == 4500){
30             return "Uang yang akan diambil : " . $jumlah . " false <br> Saldo sekarang : " . $this->saldo;
31         }else{
32             return "Uang yang akan diambil : " . $jumlah . " true <br> Saldo sekarang : " . $this->saldo -=$jumlah;
33         }
34     }
35 }
36
37 $tabungan = new PengambilanUang(5000);
38 echo $tabungan->getSaldo();
39 echo "<br> ----- <br>";
40 echo $tabungan->ambilUang(4500);
41 echo "<br> ----- <br>";
42 echo $tabungan->ambilUang(2500);
43
44 </div>
45 </body>
46 </html>
```

Output yang dihasilkan adalah sebagai berikut:



1. a. Buatlah kelas-kelas berdasarkan UML class diagram dibawah ini!

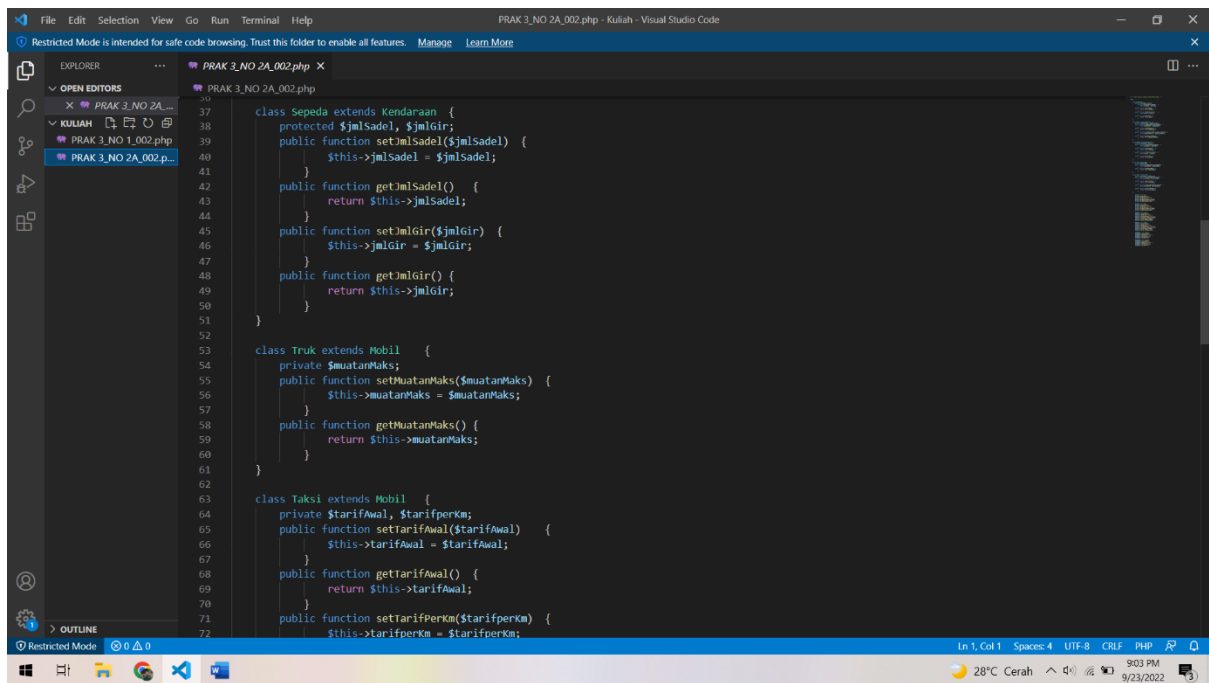


Hasil pseudocode dari class diatas adalah sebagai berikut:

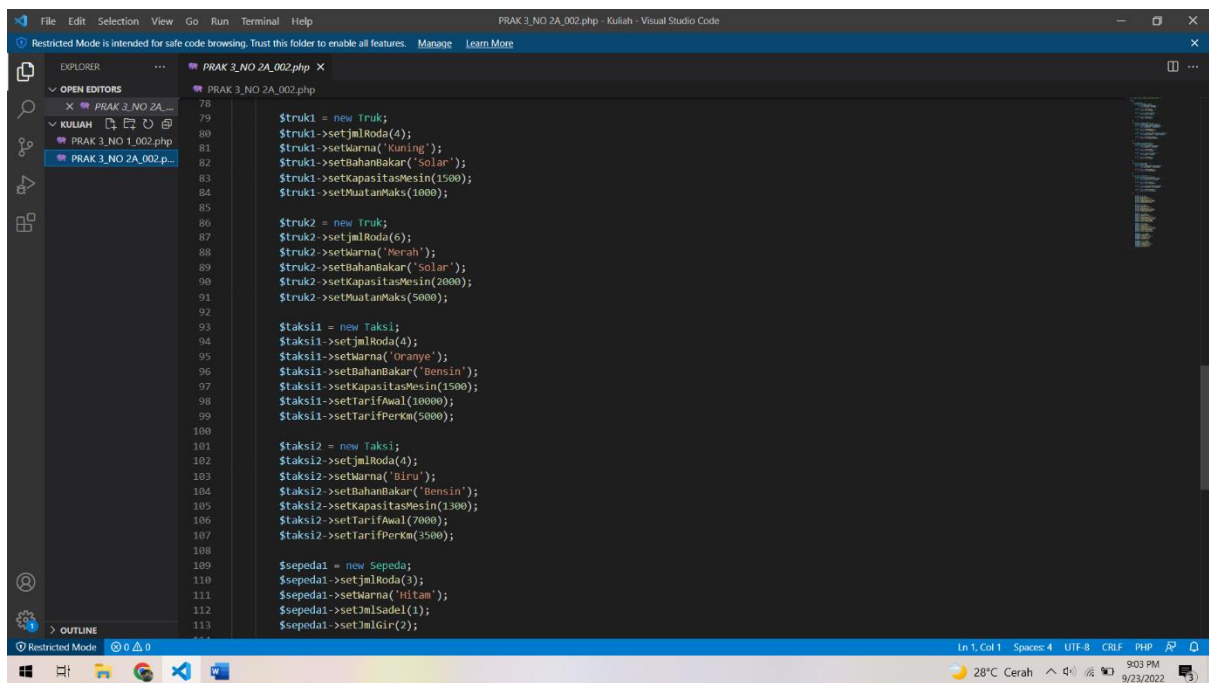
```

1  <!-- Diego Athalla Samudero_21091397042_82021 -->
2
3  <?php
4
5  class Kendaraan {
6      protected $jmlRoda, $warna;
7      function setJmlRoda($jmlRoda) {
8          $this->jmlRoda = $jmlRoda;
9      }
10     public function getJmlRoda() {
11         return $this->jmlRoda;
12     }
13     public function setWarna($warna) {
14         $this->warna = $warna;
15     }
16     public function getWarna() {
17         return $this->warna;
18     }
19 }
20
21 class Mobil extends Kendaraan {
22     protected $bahanBakar, $kapasitasMesin;
23     public function setBahanBakar($bahanBakar) {
24         $this->bahanBakar = $bahanBakar;
25     }
26     public function getBahanBakar() {
27         return $this->bahanBakar;
28     }
29     public function setKapasitasMesin($kapasitasMesin) {
30         $this->kapasitasMesin = $kapasitasMesin;
31     }
32     public function getKapasitasMesin() {
33         return $this->kapasitasMesin;
34     }
35 }
36

```



```
37 class Sepeda extends Kendaraan {
38     protected $jmlSadel, $jmlGir;
39     public function setJmlSadel($jmlSadel) {
40         $this->jmlSadel = $jmlSadel;
41     }
42     public function getJmlSadel() {
43         return $this->jmlSadel;
44     }
45     public function setJmlGir($jmlGir) {
46         $this->jmlGir = $jmlGir;
47     }
48     public function getJmlGir() {
49         return $this->jmlGir;
50     }
51 }
52
53 class Truk extends Mobil {
54     private $muatanMaks;
55     public function setMuatanMaks($muatanMaks) {
56         $this->muatanMaks = $muatanMaks;
57     }
58     public function getMuatanMaks() {
59         return $this->muatanMaks;
60     }
61 }
62
63 class Taksi extends Mobil {
64     private $tarifAwal, $tarifPerKm;
65     public function setTarifAwal($tarifAwal) {
66         $this->tarifAwal = $tarifAwal;
67     }
68     public function getTarifAwal() {
69         return $this->tarifAwal;
70     }
71     public function setTarifPerKm($tarifPerKm) {
72         $this->tarifPerKm = $tarifPerKm;
73     }
74 }
```



```
78
79 $truk1 = new Truk;
80 $truk1->setJmlRoda(4);
81 $truk1->setWarna('Kuning');
82 $truk1->setBahanBakar('solar');
83 $truk1->setKapasitasMesin(1500);
84 $truk1->setMuatanMaks(1000);
85
86 $truk2 = new Truk;
87 $truk2->setJmlRoda(6);
88 $truk2->setWarna('Merah');
89 $truk2->setBahanBakar('solar');
90 $truk2->setKapasitasMesin(2000);
91 $truk2->setMuatanMaks(5000);
92
93 $taksi1 = new Taksi;
94 $taksi1->setJmlRoda(4);
95 $taksi1->setWarna('Oranye');
96 $taksi1->setBahanBakar('Bensin');
97 $taksi1->setKapasitasMesin(1500);
98 $taksi1->setTarifAwal(10000);
99 $taksi1->setTarifPerKm(5000);
100
101 $taksi2 = new Taksi;
102 $taksi2->setJmlRoda(4);
103 $taksi2->setWarna('Biru');
104 $taksi2->setBahanBakar('Bensin');
105 $taksi2->setKapasitasMesin(1300);
106 $taksi2->setTarifAwal(7000);
107 $taksi2->setTarifPerKm(3500);
108
109 $sepeda1 = new Sepeda;
110 $sepeda1->setJmlRoda(2);
111 $sepeda1->setWarna('Hitam');
112 $sepeda1->setJmlSadel(1);
113 $sepeda1->setJmlGir(2);
114 }
```

b. Selanjutnya buatlah kelas Tes.php yang membuat obyek-obyek serta mengeset nilai variabel seperti pada Tabel 1 dan tampilkan data per obyek.

Tabel 1. Data obyek

Obyek	jmlRoda	warna	bahanBakar	kapasitasMesin	muatanMaks	
truk1	4	kuning	solar	1500	1000	
truk2	6	merah	solar	2000	5000	
					tarifAwal	tarifPerKm
taksi1	4	oranye	bensin	1500	10000	5000
taksi1	4	biru	bensin	1300	7000	3500
			jmlSadel	jmlGir		
sepeda1	3	hitam	1	2		
sepeda2	2	putih	2	5		

Pseudocode dalam Tes.php adalah sebagai berikut:

```
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PRAK_3_NO_2B_002.php - Kuliah - Visual Studio Code
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EXPLORER
PRAK_3_NO_2A_002.php
PRAK_3_NO_2B_002.php X
KULIAH
PRAK_3_NO_1_002.php
PRAK_3_NO_2A_002.p...
PRAK_3_NO_2B_002.p...

OUTLINE
1 <!-- Diego Athalla Samudero_21091397042_02021 -->
2
3 </php>
4 require_once 'Nomor_2a.php';
5 ?>
6
7 <!DOCTYPE html>
8 <html lang="id">
9 <head>
10 <title>Praktikum 3</title>
11 <link rel="stylesheet" href="no2.css">
12 </head>
13
14 <body>
15 <div class="table1">
16 <table border="1" width="50%">
17 <tr>
18 <td>No</td>
19 <td>Object</td>
20 <td>Jumlah Roda</td>
21 <td>Warna</td>
22 <td>Bahan Bakar</td>
23 <td>Kapasitas Mesin</td>
24 <td>Muatan Maksimal</td>
25 <td>Tarif Awal</td>
26 <td>Tarif Per Km</td>
27 <td>Jumlah Sadel</td>
28 <td>Jumlah Glr</td>
29 </tr>
30 <tr>
31 <td>1</td>
32 <td>Truk 1</td>
33 <td><?= $truk1->getJmlRoda(); ?></td>
34 <td><?= $truk1->getWarna(); ?></td>
35 <td><?= $truk1->getBahanBakar(); ?></td>
36 <td><?= $truk1->getKapasitasMesin(); ?></td>
37 <td><?= $truk1->getMuatanMaks(); ?></td>
38 <td><?= $truk1->getTarifAwal(); ?></td>
39 <td><?= $truk1->getTarifPerKm(); ?></td>
40 <td><?= $truk1->getJumlahSadel(); ?></td>
41 <td><?= $truk1->getJumlahGlr(); ?></td>
42 </tr>
43 <tr>
44 <td>2</td>
45 <td>Truk 2</td>
46 <td><?= $truk2->getJmlRoda(); ?></td>
47 <td><?= $truk2->getWarna(); ?></td>
48 <td><?= $truk2->getBahanBakar(); ?></td>
49 <td><?= $truk2->getKapasitasMesin(); ?></td>
50 <td><?= $truk2->getMuatanMaks(); ?></td>
51 <td><?= $truk2->getTarifAwal(); ?></td>
52 <td><?= $truk2->getTarifPerKm(); ?></td>
53 <td><?= $truk2->getJumlahSadel(); ?></td>
54 <td><?= $truk2->getJumlahGlr(); ?></td>
55 </tr>
56 <tr>
57 <td>3</td>
58 <td>Taksi 1</td>
59 <td><?= $taksi1->getJmlRoda(); ?></td>
60 <td><?= $taksi1->getWarna(); ?></td>
61 <td><?= $taksi1->getBahanBakar(); ?></td>
62 <td><?= $taksi1->getKapasitasMesin(); ?></td>
63 <td><?= $taksi1->getMuatanMaks(); ?></td>
64 <td><?= $taksi1->getTarifAwal(); ?></td>
65 <td><?= $taksi1->getTarifPerKm(); ?></td>
66 <td><?= $taksi1->getJumlahSadel(); ?></td>
67 <td><?= $taksi1->getJumlahGlr(); ?></td>
68 </tr>
69 </table>
70 </div>
71 </body>
72 </html>
```

```
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PRAK_3_NO_2B_002.php - Kuliah - Visual Studio Code
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EXPLORER
PRAK_3_NO_2A_002.php
PRAK_3_NO_2B_002.php X
KULIAH
PRAK_3_NO_1_002.php
PRAK_3_NO_2A_002.p...
PRAK_3_NO_2B_002.p...

OUTLINE
31 <td>1</td>
32 <td>Truk 1</td>
33 <td><?= $truk1->getJmlRoda(); ?></td>
34 <td><?= $truk1->getWarna(); ?></td>
35 <td><?= $truk1->getBahanBakar(); ?></td>
36 <td><?= $truk1->getKapasitasMesin(); ?></td>
37 <td><?= $truk1->getMuatanMaks(); ?></td>
38 <td><?= $truk1->getTarifAwal(); ?></td>
39 <td><?= $truk1->getTarifPerKm(); ?></td>
40 <td><?= $truk1->getJumlahSadel(); ?></td>
41 <td><?= $truk1->getJumlahGlr(); ?></td>
42 </tr>
43 <tr>
44 <td>2</td>
45 <td>Truk 2</td>
46 <td><?= $truk2->getJmlRoda(); ?></td>
47 <td><?= $truk2->getWarna(); ?></td>
48 <td><?= $truk2->getBahanBakar(); ?></td>
49 <td><?= $truk2->getKapasitasMesin(); ?></td>
50 <td><?= $truk2->getMuatanMaks(); ?></td>
51 <td><?= $truk2->getTarifAwal(); ?></td>
52 <td><?= $truk2->getTarifPerKm(); ?></td>
53 <td><?= $truk2->getJumlahSadel(); ?></td>
54 <td><?= $truk2->getJumlahGlr(); ?></td>
55 </tr>
56 <tr>
57 <td>3</td>
58 <td>Taksi 1</td>
59 <td><?= $taksi1->getJmlRoda(); ?></td>
60 <td><?= $taksi1->getWarna(); ?></td>
61 <td><?= $taksi1->getBahanBakar(); ?></td>
62 <td><?= $taksi1->getKapasitasMesin(); ?></td>
63 <td><?= $taksi1->getMuatanMaks(); ?></td>
64 <td><?= $taksi1->getTarifAwal(); ?></td>
65 <td><?= $taksi1->getTarifPerKm(); ?></td>
66 <td><?= $taksi1->getJumlahSadel(); ?></td>
67 <td><?= $taksi1->getJumlahGlr(); ?></td>
68 </tr>
69 </table>
70 </div>
71 </body>
72 </html>
```

```
File Edit Selection View Go Run Terminal Help
PRAK_3_NO_2B_002.php - Kuliah - Visual Studio Code
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EXPLORER
PRAK_3_NO_2A_002.php
PRAK_3_NO_2B_002.php X

OPEN EDITORS
PRAK_3_NO_2A_002.php
PRAK_3_NO_2B_002.php X

PRAK_3_NO_2B_002.php
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</tr>
<tr>
<td>3</td>
<td>Taksi 1</td>
<td>= $taksi1-&gt;getJmlRoda(); ?&gt;&lt;/td&gt;
&lt;td&gt;<?= $taksi1-&gt;getMarna(); ?&gt;&lt;/td&gt;
&lt;td&gt;<?= $taksi1-&gt;getBahanBakar(); ?&gt;&lt;/td&gt;
&lt;td&gt;<?= $taksi1-&gt;getKapasitasMesin(); ?&gt;&lt;/td&gt;
&lt;td&gt;&lt;/td&gt;
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&lt;td&gt;<?= $taksi1-&gt;getTarifPerkm(); ?&gt;&lt;/td&gt;
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&lt;/tr&gt;
&lt;tr&gt;
&lt;td&gt;4&lt;/td&gt;
&lt;td&gt;Taksi 2&lt;/td&gt;
&lt;td&gt;<?= $taksi2-&gt;getJmlRoda(); ?&gt;&lt;/td&gt;
&lt;td&gt;<?= $taksi2-&gt;getMarna(); ?&gt;&lt;/td&gt;
&lt;td&gt;<?= $taksi2-&gt;getBahanBakar(); ?&gt;&lt;/td&gt;
&lt;td&gt;<?= $taksi2-&gt;getKapasitasMesin(); ?&gt;&lt;/td&gt;
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&lt;td&gt;<?= $taksi2-&gt;getTarifAwal(); ?&gt;&lt;/td&gt;
&lt;td&gt;<?= $taksi2-&gt;getTarifPerkm(); ?&gt;&lt;/td&gt;
&lt;td&gt;&lt;/td&gt;
&lt;td&gt;&lt;/td&gt;
&lt;/tr&gt;
&lt;tr&gt;
&lt;td&gt;5&lt;/td&gt;
&lt;td&gt;Sepeda 1&lt;/td&gt;
&lt;td&gt;<?= $sepeda1-&gt;getJmlRoda(); ?&gt;&lt;/td&gt;
&lt;td&gt;<?= $sepeda1-&gt;getMarna(); ?&gt;&lt;/td&gt;
&lt;td&gt;&lt;/td&gt;
&lt;td&gt;&lt;/td&gt;
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&lt;td&gt;&lt;/td&gt;
&lt;/tr&gt;
&lt;/table&gt;
&lt;/div&gt;
&lt;/body&gt;
&lt;/html&gt;</pre
```

```
File Edit Selection View Go Run Terminal Help
PRAK_3_NO_2B_002.php - Kuliah - Visual Studio Code
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EXPLORER
PRAK_3_NO_2A_002.php
PRAK_3_NO_2B_002.php X

OPEN EDITORS
PRAK_3_NO_2A_002.php
PRAK_3_NO_2B_002.php X

PRAK_3_NO_2B_002.php
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108
109
110
111

<tr>
<td>5</td>
<td>Sepeda 1</td>
<td>= $sepeda1-&gt;getJmlRoda(); ?&gt;&lt;/td&gt;
&lt;td&gt;<?= $sepeda1-&gt;getMarna(); ?&gt;&lt;/td&gt;
&lt;td&gt;&lt;/td&gt;
&lt;td&gt;&lt;/td&gt;
&lt;td&gt;&lt;/td&gt;
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&lt;td&gt;&lt;/td&gt;
&lt;td&gt;&lt;/td&gt;
&lt;/tr&gt;
&lt;tr&gt;
&lt;td&gt;6&lt;/td&gt;
&lt;td&gt;Sepeda 2&lt;/td&gt;
&lt;td&gt;<?= $sepeda2-&gt;getJmlRoda(); ?&gt;&lt;/td&gt;
&lt;td&gt;<?= $sepeda2-&gt;getMarna(); ?&gt;&lt;/td&gt;
&lt;td&gt;&lt;/td&gt;
&lt;td&gt;&lt;/td&gt;
&lt;td&gt;&lt;/td&gt;
&lt;td&gt;&lt;/td&gt;
&lt;td&gt;<?= $sepeda2-&gt;getJmlSadel(); ?&gt;&lt;/td&gt;
&lt;td&gt;<?= $sepeda2-&gt;getJmlGir(); ?&gt;&lt;/td&gt;
&lt;td&gt;&lt;/td&gt;
&lt;/tr&gt;
&lt;/table&gt;
&lt;/div&gt;
&lt;/body&gt;
&lt;/html&gt;</pre
```


Hasil setelah ditambah Tes.php

Praktikum 3

Tabel Data Obyek

Obyek	Jumlah Roda	Warna	Bahan bakar	Kapasitas Mesin	Muatan Maks	Tarif Awal	Tarif Per Km	Jumlah Sadel	Jumlah Gir
Truk1	4	Kuning	Solar	1500	1000	-	-	-	-
Truk2	6	Merah	Solar	2000	5000	-	-	-	-
Taksi1	4	Oranye	Bensin	1500	-	10000	5000	-	-
Taksi2	4	Biru	Bensin	1300	-	7000	3500	-	-
Sepeda1	3	Hitam	-	-	-	-	-	1	2
Sepeda2	2	Putih	-	-	-	-	-	2	5