

Laporan Pemrograman Berorientasi Obyek
Ujian Tengah Semester 2022
Praktikum 6



Disusun Oleh:

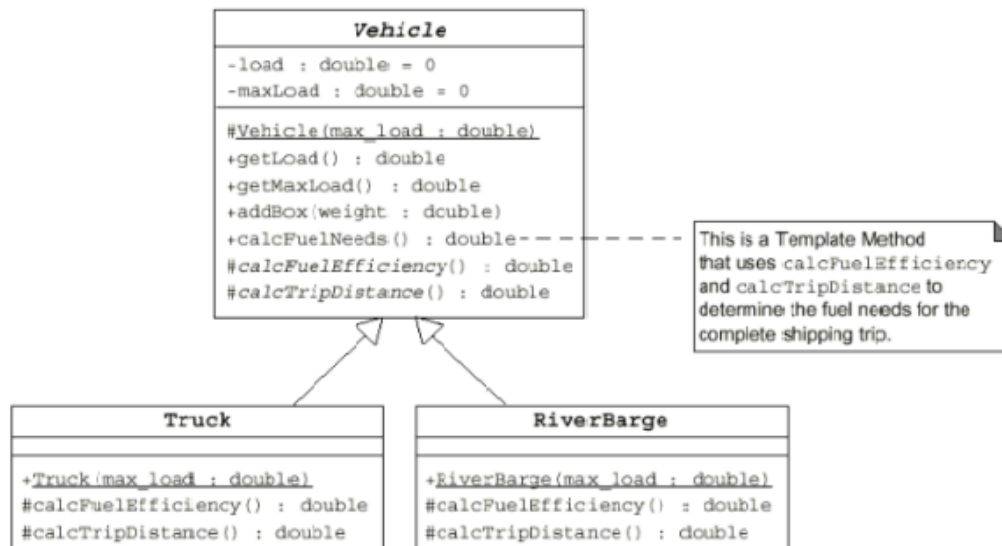
Syarifah Saskia Aulia (21091397012)

D4 MANAJEMEN INFORMATIKA

PROGRAM VOKASI

UNIVERSITAS NEGERI SURABAYA

TAHUN AJARAN 2021/2022



1.

```

C: > xampp1 >htdocs > No1 Prak6.php > ...
 1  <!-- Nama      : Syarifah Saskia
 2      Nim       : 21091397012
 3      Kelas    : 2021B -->
 4  <?php
 5
 6  require_once 'No1 Abstract Prak6.php';
 7
 8  class Truck extends Vehicle {
 9      public function __construct($maxLoad, $name)
10      {
11          $this->maxLoad = $maxLoad;
12          $this->name = $name;
13      }
14
15      public function calcFuelNeeds()
16      {
17          $fuel = $this->calcFuelEfficiency();
18          $trip = $this->calcTripDistance();
19
20          return ceil($fuel /= $trip);
21      }
22  }
23
24  class RiverBarge extends Vehicle {
25      public function __construct($maxLoad, $name)
26      {
  
```

```

26     {
27         $this->maxLoad = $maxLoad;
28         $this->name = $name;
29     }
30
31     public function calcFuelNeeds()
32     {
33         $fuel = $this->calcFuelEfficiency();
34         $trip = $this->calcTripDistance();
35
36         return ceil($fuel /= $trip);
37     }
38 }
39 $truck = new Truck(16000, 'Truk');
40 $riverBarge = new RiverBarge(15000, 'Perahu');

```

- Abstract PHP

```

C: > xampp1 > htdocs > No1 Abstract Prak6.php > Vehicle
1  <!-- Nama : Syarifah Saskia
2      Nim : 21091397012
3      Kelas : 2021B -->
4
5  <?php
6
7  abstract class Vehicle {
8      private $load = 0;
9      protected $maxLoad = 0, $name;
10
11     protected function __construct($maxLoad, $name) {
12         $this->$maxLoad = $maxLoad;
13         $this->$name = $name;
14     }
15
16     public function getLoad() {
17         return $this->load;
18     }
19
20     public function getMaxLoad() {
21         echo 'Maksimal muatan ' . $this->name . ' ' ;
22         return $this->maxLoad;
23     }
24

```

```

25     public function addBox($weight) {
26         if ($this->load >= $this->maxLoad) {
27             echo "$this->name menambah muatan sebesar $weight <br>";
28             echo 'Muatan telah penuh tidak bisa menambah lagi';
29         }else {
30             $this->load += $weight;
31             echo "$this->name menambah muatan sebesar $weight";
32         }
33     }
34
35     abstract public function calcFuelNeeds();
36
37     protected function calcFuelEfficiency() {
38         $range = 50000000;
39         $range /= $this->load;
40         return $range;
41     }
42
43     protected function calcTripDistance() {
44         return 500;
45     }
46 }

```

- Index PHP

```

C: > xampp1 > htdocs > No1 Index Prak6.php > html
1  <!-- Nama : Syarifah Saskia
2      Nim : 21091397012
3      Kelas : 2021B -->
4
5  <?php
6      require_once 'No1 Prak6.php';
7  ?>
8
9  <!DOCTYPE html>
10 <html lang="id">
11
12 <head>
13     <!-- Bootstrap CSS -->
14     <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.1.3/dist/css/bootstrap.min.css" rel="stylesheet"
15         integrity="sha384-1BmE4kWBq78iYhFldvKuhfTAU6auU8tT94WrHftjDbrCEXSU1oBoqyl2QvZ6jIW3" crossorigin="anonymous">
16
17     <title>PBO Praktikum 6</title>
18 </head>
19
20 <body>
21     <div class="container">
22         <br>
23         <h2 class="text-center">PBO - Praktikum 6</h2>
24         <div class="row">
25             <div class="col-5 mx-auto border p-3 mt-2">
26                 <h4 class="text-center"><strong>Soal 1</strong></h4>
27                 <br><br>

```

```

28 <b><?= $truck->getMaxLoad() . ' kg'; ?> <br></b>
29 <br>
30 <?= $truck->addBox(1000) . ' kg'; ?> <br>
31 <?= $truck->addBox(7000) . ' kg'; ?> <br>
32 <?= $truck->addBox(8000) . ' kg'; ?> <br>
33
34 <?php
35     echo "Jadi, Butuh Bahan Bakar sebanyak " . $truck->calcFuelNeeds() . ' Liter'. '<br>';
36 ?>
37 <br>
38 -----
39 <br>
40 <br>
41 <b><?= $riverBarge->getMaxLoad() . ' kg'; ?> <br></b>
42 <br>
43 <?= $riverBarge->addBox(2000) . ' kg'; ?> <br>
44 <?= $riverBarge->addBox(4000) . ' kg'; ?> <br>
45 <?= $riverBarge->addBox(9000) . ' kg'; ?> <br>
46
47 <?php
48     echo "Jadi, Butuh Bahan Bakar sebanyak " . $riverBarge->calcFuelNeeds() . ' Liter';
49 ?>
50 </div>
51 </div>
52 </div>
53 </body>
54
55 </html>

```

- Output:

PBO - Praktikum 6

Soal 1

Maksimal muatan Truk 16000 kg

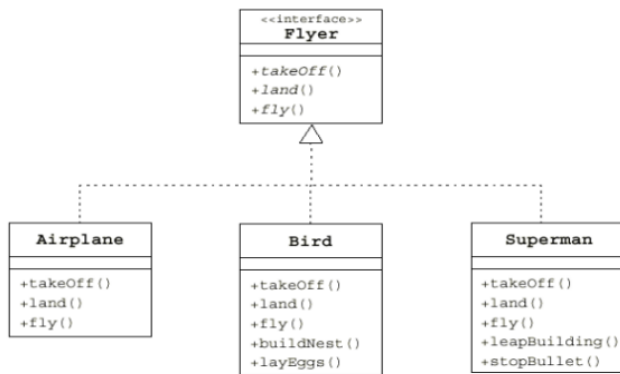
Truk menambah muatan sebesar 1000 kg
 Truk menambah muatan sebesar 7000 kg
 Truk menambah muatan sebesar 8000 kg
 Jadi, Butuh Bahan Bakar sebanyak 7 Liter

Maksimal muatan Perahu 15000 kg

Perahu menambah muatan sebesar 2000 kg
 Perahu menambah muatan sebesar 4000 kg
 Perahu menambah muatan sebesar 9000 kg
 Jadi, Butuh Bahan Bakar sebanyak 7 Liter

- Analisis:

Dari abstract class pada class Vehicle diatas, menunjukkan bahwa method calc Fuel Needs berfungsi untuk menghitung bahan bakar yang digunakan. Kemudian Abstract method diletakkan pada class Vehicle sebagai parent class dan diakses oleh child kelasnya yaitu class Truk, dan juga class River Barge digunakan untuk mengembalikan nilai yang dihasilkan dari arti pembagian 2 method, yaitu ada calc Fuel Efficiency dan calc Trip Distance.



2.

- PHP

```

C:\> xampp1 > htdocs > No 2 prak6.php > ...
1  <!-- Nama : Syarifah Saskia
2  Nim : 21091397012
3  Kelas : 2021B -->
4
5  <?php
6
7  require_once 'interface no2 prak6.php';
8
9  class Airplane implements Flyer {
10     public function takeOff() {
11         return 'Pesawat lepas landas..';
12     }
13
14     public function land() {
15         return 'Pesawat mendarat';
16     }
17
18     public function fly() {
19         return 'Pesawat dalam perjalanan';
20     }
21 }
22
23 class Bird implements Flyer {
24     public function takeOff() {
25         return 'Burung mencari makan';
26     }
27

```

```

28     public function land() {
29         return 'Burung kembali pulang';
30     }
31
32     public function fly() {
33         return 'Burung terbang';
34     }
35
36     public function buildNest() {
37         return 'Burung membuat sarang';
38     }
39
40     public function layEggs() {
41         return 'Burung bertelur';
42     }
43 }
44
45 class Superman implements Flyer {
46     public function takeOff() {
47         return 'Superman mengejar Batman';
48     }
49
50     public function land() {
51         return 'Superman melawan Batman';
52     }
53
54     public function fly() {
55         return 'Superman melancarkan pukulan';
56     }
57 }
58

```

```

56     }
57
58     public function leapBuilding() {
59         return 'Batman terpenjal menabrak bangunan pencakar langit';
60     }
61
62     public function stopBullet() {
63         return 'Polisi menembaki superman namun ditangkis';
64     }
65 }
66
67 $airplane = new Airplane;
68 $bird = new Bird;
69 $superman = new Superman;

```

- Interface PHP

```

C: > xampp1 > htdocs > No2 Interface prak6.php > Sailer > cruise
1  <!-- Nama : Syarifah Saskia
2      Nim : 21091397012
3      Kelas : 2021B -->
4
5  <?php
6
7  interface Flyer {
8      public function takeOff();
9      public function land();
10     public function fly();
11 }
12
13 interface Sailer {
14     public function dock();
15     public function cruise();
16 }

```

- Index PHP

```

C: > xampp1 > htdocs > No2 Index prak6.php > html
1  <!-- Nama : Syarifah Saskia
2      Nim : 21091397012
3      Kelas : 2021B -->
4
5  <?php
6      require_once 'no 2 prak6.php';
7  ?>
8
9  <!DOCTYPE html>
10 <html lang="en">
11
12 <head>
13     <!-- Bootstrap CSS -->
14     <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.1.3/dist/css/bootstrap.min.css" rel="stylesheet"
15         integrity="sha384-1BmE4kWBq78iYhFldvKuhfTAU6auU8tT94WrHftjDbrCEXSU1oBoqy12QvZ6jIW3" crossorigin="anonymous">
16
17     <title>Praktikum 6</title>
18 </head>
19
20 <body>
21     <div class="container">
22         <br>
23         <div class="row">
24             <div class="col-5 mx-auto border p-3 mt-2">
25                 <h4 class="text-center"><strong><u>Soal 2</u></strong></h4>
26                 <br><br>
27             </div>

```

```

28         echo "Superman";
29         ?></b> <br>
30         <?= $superman->land(); ?> <br>
31         <?= $superman->takeOff(); ?> <br>
32         <?= $superman->fly(); ?> <br>
33         <?= $superman->leapBuilding(); ?> <br>
34         <?= $superman->stopBullet(); ?> <br>
35         <br>
36         <b><?php
37             echo "Bird";
38             ?></b> <br>
39             <?= $bird->buildNest(); ?> <br>
40             <?= $bird->takeOff(); ?> <br>
41             <?= $bird->fly(); ?> <br>
42             <?= $bird->land(); ?> <br>
43             <?= $bird->layEggs(); ?> <br>
44             <br>
45             <b><?php
46                 echo "Airplane";
47                 ?></b> <br>
48                 <?= $airplane->takeOff(); ?> <br>
49                 <?= $airplane->fly(); ?> <br>
50                 <?= $airplane->land(); ?> <br>
51             </div>
52         </div>
53     </div>
54 </body>
55
56 </html>

```

- Output:

Soal 2

Superman

Superman melawan Batman
 Superman mengejar Batman
 Superman melancarkan pukulan
 Batman terpenggal menabrak bangunan pencakar langit
 Polisi menembaki superman namun ditangkis

Bird

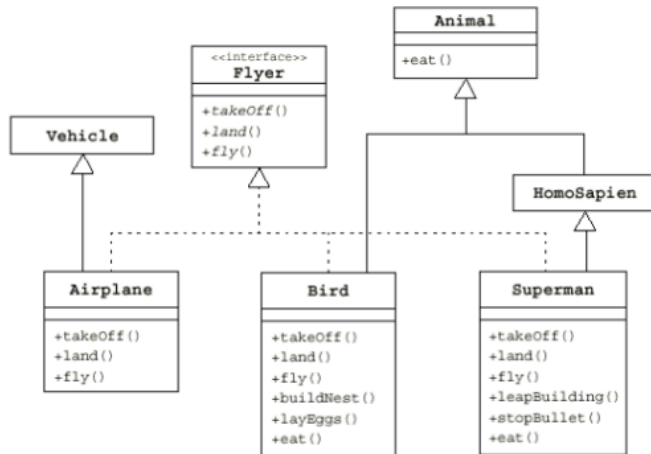
Burung membuat sarang
 Burung mencari makan
 Burung terbang
 Burung kembali pulang
 Burung bertelur

Airplane

Pesawat lepas landas..
 Pesawat dalam perjalanan
 Pesawat mendarat

- Analisis:

Polymorphism dengan penggunaan Interface Flyer sehingga semua class yang Implements dari interface Flyer Harus Memiliki method take off, land, dan fly.



3.

- PHP

```

C: > xampp1 > htdocs > No 3 prak6.php > ...
1  <!-- Nama : Syarifah Saskia
2      Nim : 21091397012
3      Kelas : 2021B -->
4
5  <?php
6
7  require_once 'abstrac no 3 prak6.php';
8  require_once 'interface no 3 prak6.php';
9
10 class Animal
11 {
12     protected $name;
13
14     public function __construct($name)
15     {
16         $this->name = $name;
17     }
18
19     public function eat()
20     {
21         return $this->name . ' sedang makan';
22     }
23 }
24
25 class Homosapiens extends Animal {}
26
  
```

```

27 class Airplane2 extends Vehicle implements Flyer
28 {
29     public function __construct($maxLoad, $name)
30     {
31         $this->maxLoad = $maxLoad;
32         $this->name = $name;
33     }
34
35     public function takeOff()
36     {
37         return "$this->name lepas landas";
38     }
39
40     public function land()
41     {
42         return "$this->name mendarat";
43     }
44
45     public function fly()
46     {
47         return "$this->name dalam perjalanan";
48     }
49
50     public function calcFuelNeeds()
51     {
52         $fuel = $this->calcFuelEfficiency();
53         $trip = $this->calcTripDistance();
54     }
55 }
  
```

```

54
55
56
57     return ceil($fuel /= $strip);
58 }
59 }
60
61 class Superman2 extends Homosapiens implements Flyer
62 {
63     public function takeOff()
64     {
65         return "$this->name mengejar Batman";
66     }
67
68     public function land()
69     {
70         return "$this->name melawan Batman";
71     }
72
73     public function fly()
74     {
75         return "$this->name melancarkan pukulan";
76     }
77
78     public function leapBuilding()
79     {
80         return "Batman terpelant menabrak bangunan pencakar langit";
81     }

```

```

82
83     public function stopBullet()
84     {
85         return "Polisi menembaki $this->name namun ditangkis";
86     }
87 }
88
89 $burung = new Animal('Burung');
90 $manusia = new Homosapiens('Aransha');
91 $airplane2 = new Airplane2(25000, 'Batik Air');
92 $superman2 = new Superman2('Superman');

```

- Abstract PHP

```

C:\> xampp1 > htdocs > No3 Abstrac prak6.php > Vehicle
1  <!-- Nama : Syarifah Saskia
2     Nim : 21091397012
3     Kelas : 2021B -->
4
5  <?php
6
7  abstract class Vehicle {
8      private $load = 0;
9      protected $maxLoad = 0, $name;
10
11      protected function __construct($maxLoad, $name) {
12          $this->$maxLoad = $maxLoad;
13          $this->$name = $name;
14      }
15
16      public function getLoad() {
17          return $this->load;
18      }
19
20      public function getMaxLoad() {
21          echo 'Maksimal muatan ' . $this->name . ' ';
22          return $this->maxLoad;
23      }
24

```

```

25     public function addBox($weight) {
26         if ($this->load >= $this->maxLoad) {
27             echo "$this->name menambah muatan sebesar $weight <br>";
28             echo 'Muatan telah penuh tidak bisa menambah lagi';
29         }else {
30             $this->load += $weight;
31             echo "$this->name menambah muatan sebesar $weight";
32         }
33     }
34
35     abstract public function calcFuelNeeds();
36
37     protected function calcFuelEfficiency() {
38         $range = 50000000;
39         $range /= $this->load;
40         return $range;
41     }
42
43     protected function calcTripDistance() {
44         return 500;
45     }
46

```

- Interface PHP

```

C: > xampp1 > htdocs > No3 Interface prak6.php > ...
1  <!-- Nama      : Syarifah Saskia
2      Nim       : 21091397012
3      Kelas    : 2021B -->
4
5  <?php
6
7  interface Flyer {
8      public function takeOff();
9      public function land();
10     public function fly();
11 }
12
13 interface Sailer {
14     public function dock();
15     public function cruise();
16 }

```

- Index PHP

```

C: > xampp1 > htdocs > No3 Index prak6.php > html
1  <!-- Nama      : Syarifah Saskia
2      Nim       : 21091397012
3      Kelas    : 2021B -->
4
5  <?php
6      require_once 'no 3 prak6.php';
7  ?>
8
9  <!DOCTYPE html>
10 <html lang="id">
11
12 <head>
13     <!-- Bootstrap CSS -->
14     <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.1.3/dist/css/bootstrap.min.css" rel="stylesheet"
15         integrity="sha384-1BmE4kWBq78iYhF1dvKuhfTAU6auU8tT94WVhftjDbrCEXSU1oBoqyl2QvZ6jIW3" crossorigin="anonymous">
16
17     <title>Praktikum 6</title>
18 </head>
19 <body>
20     <div class="container">
21         <div class="row">
22             <div class="col-5 mx-auto border p-3 mt-2">
23                 <h4 class="text-center"><strong><u>Soal 3</u></strong></h4>
24                 <br><br>
25                 <?= $burung->eat(); ?> <br>
26                 <?= $manusia->eat(); ?> <br>
27                 <br>

```

```

28
29         <b><?= $airplane2->getMaxLoad() . ' kg'; ?> <br></b>
30         <?= $airplane2->addBox(6000) . ' kg'; ?> <br>
31         <?= $airplane2->addBox(2000) . ' kg'; ?> <br>
32         <?= $airplane2->addBox(7000) . ' kg'; ?> <br>
33         <?= $airplane2->addBox(5000) . ' kg'; ?> <br>
34         <?= $airplane2->takeOff(); ?> <br>
35         <?= $airplane2->fly(); ?> <br>
36         <?= $airplane2->land(); ?> <br>
37
38         <?php
39             echo "Jadi, Butuh Bahan Bakar sebanyak " . $airplane2->calcFuelNeeds() . ' Liter'. ' <br>';
40             ?>
41         <br>
42         <?= $superman2->eat(); ?> <br>
43         <?= $superman2->land(); ?> <br>
44         <?= $superman2->takeOff(); ?> <br>
45         <?= $superman2->fly(); ?> <br>
46         <?= $superman2->leapBuilding(); ?> <br>
47         <?= $superman2->stopBullet(); ?> <br>
48     </div>
49 </div>
50 </div>
51 </body>
52
53 </html>

```

- Output:

Soal 3

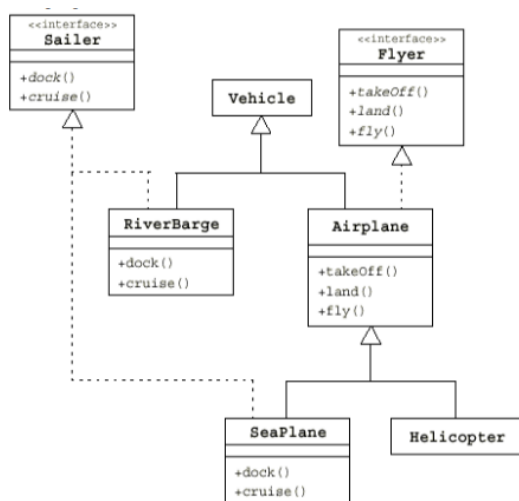
Burung sedang makan
Aransha sedang makan

Maksimal muatan Batik Air 25000 kg
Batik Air menambah muatan sebesar 6000 kg
Batik Air menambah muatan sebesar 2000 kg
Batik Air menambah muatan sebesar 7000 kg
Batik Air menambah muatan sebesar 5000 kg
Batik Air lepas landas
Batik Air dalam perjalanan
Batik Air mendarat
Jadi, Butuh Bahan Bakar sebanyak 5 Liter

Superman sedang makan
Superman melawan Batman
Superman mengejar Batman
Superman melancarkan pukulan
Batman terpental menabrak bangunan pencakar langit
Polisi menembaki Superman namun ditangkis

- Analisis:

Terdapat interface Flyer pada abstract class Vehicle. Class Bird berimplementasi dari Flyer dan turunan dari Animal sehingga memiliki method take off, land, fly, dan eat. Class Superman turunan dari homosapiens yang juga turunan dari Animal, serta implementasi dari interface Flyer. Maka class Superman memiliki method eat, take off, land, fly.



4.

- PHP

```

C:\> xampp1 >htdocs > No4 prak6.php > ...
1  <!-- Nama : Syarifah Saskia
2  Nim : 21091397012
3  Kelas : 20218 -->
4
5  <?php
6
7  require_once 'No4 Abstract Prak6.php';
8  require_once 'No4 interface prak6.php';
9
10 class RiverBarge2 extends Vehicle implements Sailer {
11     public function __construct($maxLoad, $name) {
12         $this->maxLoad = $maxLoad;
13         $this->name = $name;
14     }
15
16     public function calcFuelNeeds() {
17         $fuel = $this->calcFuelEfficiency();
18         $trip = $this->calcTripDistance();
19
20         return ceil($fuel / $trip);
21     }
22
23     public function dock() {
24         return $this->name . ' berada di dermaga';
25     }
26

```

```

27     public function cruise() {
28         return $this->name . ' sedang berlayar';
29     }
30 }
31
32 class Airplane2 implements Flyer {
33     public function takeOff() {
34         return 'Pesawat lepas landas';
35     }
36     public function land() {
37         return 'Pesawat mendarat';
38     }
39     public function fly() {
40         return 'Pesawat dalam perjalanan';
41     }
42 }
43
44 class SeaPlane extends Vehicle implements Sailer {
45     public function __construct($maxLoad, $name) {
46         $this->maxLoad = $maxLoad;
47         $this->name = $name;
48     }
49
50     public function calcFuelNeeds() {
51         $fuel = $this->calcFuelEfficiency();
52         $trip = $this->calcTripDistance();
53

```

```

54         return ceil($fuel /= $trip);
55     }
56
57     public function dock() {
58         return $this->name . ' berada di dermaga';
59     }
60
61     public function cruise() {
62         return $this->name . ' sedang berlayar';
63     }
64
65     public function takeOff() {
66         return $this->name . ' lepas landas';
67     }
68
69     public function land() {
70         return $this->name . ' mendarat';
71     }
72
73     public function fly() {
74         return $this->name . ' dalam perjalanan';
75     }
76 }
77
78 class Helicopter extends Vehicle {
79     public function __construct($maxLoad, $name) {
80         $this->maxLoad = $maxLoad;
81         $this->name = $name;
82     }

```

```

83
84     public function calcFuelNeeds() {
85         $fuel = $this->calcFuelEfficiency();
86         $trip = $this->calcTripDistance();
87
88         return ceil($fuel /= $trip);
89     }
90     public function takeOff() {
91         return $this->name . ' lepas landas';
92     }
93
94     public function land() {
95         return $this->name . ' mendarat';
96     }
97
98     public function fly() {
99         return $this->name . ' dalam perjalanan';
100    }
101 }
102
103 $riverBarge2 = new RiverBarge2(30000, 'Atomic');
104 $seaPlane = new SeaPlane(20000, 'Titanic');
105 $helicopter = new Helicopter(10000, 'Brocklyn');

```

- Interface PHP

```

C: > xampp1 >htdocs > No4 interface prak6.php > ...
1  <!-- Nama : Syarifah Saskia
2      Nim : 21091397012
3      Kelas : 2021B -->
4
5  <?php
6
7  interface Flyer {
8      public function takeOff();
9      public function land();
10     public function fly();
11 }
12
13 interface Sailer {
14     public function dock();
15     public function cruise();
16 }

```

- Index PHP

```
C: > xampp1 > htdocs > No4 index prak6.php > html
1  <!-- Nama      : Syarifah Saskia
2      Nim       : 21091397012
3      Kelas    : 2021B -->
4
5      <?php
6          require_once 'No4 prak6.php';
7      ?>
8
9  <!DOCTYPE html>
10 <html lang="en">
11
12 <head>
13     <!-- Bootstrap CSS -->
14     <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.1.3/dist/css/bootstrap.min.css" rel="stylesheet"
15         integrity="sha384-1BmE4kWBq78iYhFdvKuhfTAU6auU8tT94WrHftjDbrCEXSU1oBoqyl2QvZ6jIW3" crossorigin="anonymous">
16
17     <title>PBO - Praktikum 6</title>
18 </head>
19 <body>
20     <h2 class="text-center">PBO - Praktikum 6</h2>
21     <div class="container">
22         <div class="row">
23             <h4 class="text-center"><strong>Soal 4</strong></h4>
24             <br><br>
```

```
24         <br><br>
25         <div class="col-4 mx-auto border p-2 mt-2">
26             <b><?= $riverBarge2->getMaxLoad() . ' kg'; ?> <br></b>
27             <?= $riverBarge2->addBox(12000) . ' kg'; ?> <br>
28             <?= $riverBarge2->addBox(14000) . ' kg'; ?> <br>
29             <?= $riverBarge2->addBox(1000) . ' kg'; ?> <br>
30             <?= $riverBarge2->addBox(3000) . ' kg'; ?> <br>
31             <?= $riverBarge2->dock(); ?> <br>
32             <?= $riverBarge2->cruise(); ?> <br>
33             <?php
34                 echo "Jadi, Butuh Bahan Bakar sebanyak " . $riverBarge2->calcFuelNeeds() . ' Liter'. '<br>';
35             ?>
36         </div>
37         <div class="col-4 mx-auto border p-2 mt-2">
38             <b><?= $seaPlane->getMaxLoad() . ' kg'; ?> <br></b>
39             <?= $seaPlane->addBox(12000) . ' kg'; ?> <br>
40             <?= $seaPlane->addBox(8000) . ' kg'; ?> <br>
41             <?= $seaPlane->dock(); ?> <br>
42             <?= $seaPlane->cruise(); ?> <br>
43             <?= $seaPlane->takeOff(); ?> <br>
44             <?= $seaPlane->fly(); ?> <br>
45             <?= $seaPlane->land(); ?> <br>
46             <?php
47                 echo "Jadi, Butuh Bahan Bakar sebanyak " . $seaPlane->calcFuelNeeds() . ' Liter'. '<br>';
48             ?>
49         </div>
```

```
50         <div class="col mx-auto border p-2 mt-2">
51             <b><?= $helicopter->getMaxLoad() . ' kg'; ?> <br></b>
52             <?= $helicopter->addBox(8000) . ' kg'; ?> <br>
53             <?= $helicopter->addBox(2000) . ' kg'; ?> <br>
54             <?= $helicopter->takeOff(); ?> <br>
55             <?= $helicopter->fly(); ?> <br>
56             <?= $helicopter->land(); ?> <br>
57             <?php
58                 echo "Jadi, Butuh Bahan Bakar sebanyak " . $helicopter->calcFuelNeeds() . ' Liter'. '<br>';
59             ?>
60         </div>
61     </div>
62 </div>
63 </body>
64
65 </html>
```

- Output:

PBO - Praktikum 6

Soal 4

Maksimal muatan Atomic 30000 kg Atomic menambah muatan sebesar 12000 kg Atomic menambah muatan sebesar 14000 kg Atomic menambah muatan sebesar 1000 kg Atomic menambah muatan sebesar 3000 kg Atomic berada di dermaga Atomic sedang berlayar Jadi, Butuh Bahan Bakar sebanyak 4 Liter	Maksimal muatan Titanic 20000 kg Titanic menambah muatan sebesar 12000 kg Titanic menambah muatan sebesar 8000 kg Titanic berada di dermaga Titanic sedang berlayar Titanic lepas landas Titanic dalam perjalanan Titanic mendarat Jadi, Butuh Bahan Bakar sebanyak 5 Liter	Maksimal muatan Brocklyn 10000 kg Brocklyn menambah muatan sebesar 8000 kg Brocklyn menambah muatan sebesar 2000 kg Brocklyn lepas landas Brocklyn dalam perjalanan Brocklyn mendarat Jadi, Butuh Bahan Bakar sebanyak 10 Liter
--	--	--

- Analisis:

Implementasi Polymorphism interface diatas ditunjukkan pada class SeaPlane yang menampilkan implements interface Sailer, yaitu turunan dari class Airplane yang implements Flyer dan child dari Vehicle sehingga class SeaPlane memiliki method dock, cruise, takeoff, land, fly, dancal Fuel Needs.