

Acara 20

Pokok Bahasan : API

Acara Praktikum/Praktek: Minggu 9

Tempat : Politeknik Negeri Jember

Alokasi Waktu : 100 menit

a. Capaian Pembelajaran Mata Kuliah (CPMK)

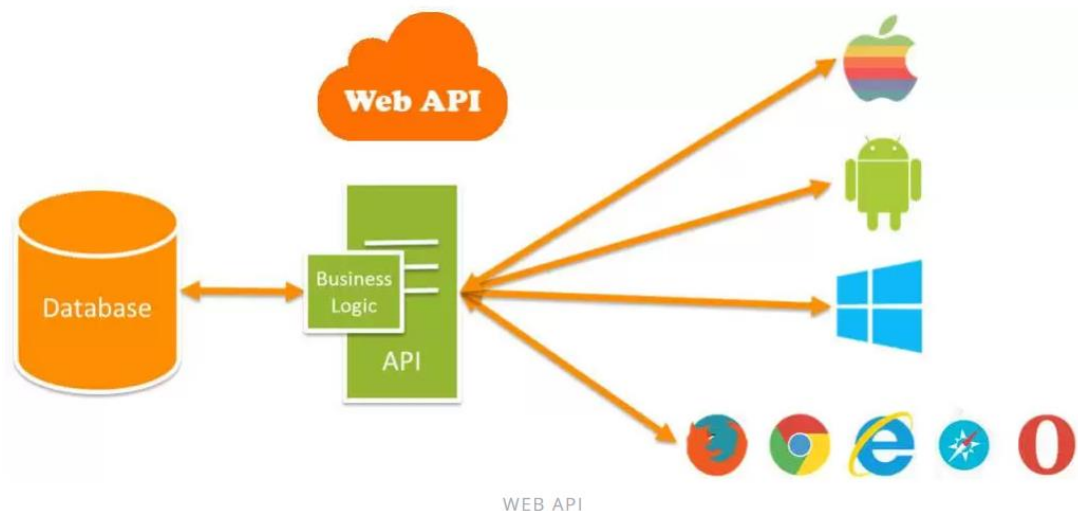
1. Mampu memahami konsep dasar dari API.
2. Mampu menerapkan API pada aplikasi berbasis PHP.

b. Indikator

Kemampuan bekerja individu dan tim terkait Pembuatan Sistem Informasi Berbasis Web

c. Dasar Teori

Application Programming Interface atau API adalah suatu penghubung antara server dengan aplikasi yang memiliki peran penting dalam menyederhanakan sebuah program jadi lebih efektif serta memungkinkan para developer untuk mengintegrasikan dan mengizinkan dua aplikasi yang berbeda secara bersamaan untuk saling terhubung satu sama lain.



Tujuan penggunaan API adalah untuk saling berbagi data antar aplikasi yang berbeda. Selain itu API juga bertujuan mempercepat proses pengembangan aplikasi dengan cara menyediakan sebuah fungsi terpisah sehingga para developer tidak perlu lagi membuat fitur yang serupa.

d. Alat dan Bahan

1. Kertas Folio
2. Spidol Hitam
3. Kertas A4

4. Proyektor
5. Web Server dan Hosting.
6. POSTMAN

e. Prosedur Kerja

Buatlah sebuah file dengan nama api.php

Ketika kode berikut :

Fungsi **get_user**

```

1 <?php
2 require_once "koneksi.php";
3 if(function_exists($_GET['function'])) {
4     $_GET['function']();
5 }
6 function get_user()
7 {
8     global $koneksi;
9     $query = $koneksi->query("SELECT * FROM user_detail");
10    while($row=mysqli_fetch_object($query))
11    {
12        $data[] = $row;
13    }
14    $response=array(
15        'status' => 1,
16        'message' => 'Success',
17        'data' => $data
18    );
19    header('Content-Type: application/json');
20    echo json_encode($response);
21 }
22

```

Fungsi **get_user_id**

```

23 function get_user_id()
24 {
25     global $koneksi;
26     if (!empty($_GET["id"])) {
27         $id = $_GET["id"];
28     }
29     $query = "SELECT * FROM user_detail WHERE id= $id";
30     $result = $koneksi->query($query);
31     while($row = mysqli_fetch_object($result))
32     {
33         $data[] = $row;
34     }
35     if($data)
36     {
37         $response = array(
38             'status' => 1,
39             'message' => 'Success',
40             'data' => $data
41         );
42     }else {
43         $response=array(
44             'status' => 0,
45             'message' => 'No Data Found'
46         );
47     }
48
49     header('Content-Type: application/json');
50     echo json_encode($response);
51 }
52
53

```

Fungsi **update_user**

```
93     function update_user()
94     {
95         global $koneksi;
96         if (!empty($_GET["id"])) {
97             $id = $_GET["id"];
98             $email = $_GET["email"];
99             $password = $_GET["password"];
100             $name = $_GET["name"];
101         }
102         $query = "UPDATE user_detail SET user_email = '$email', user_password = '$password',
103             user_fullname = '$name' WHERE id = $id";
104         if($result=mysqli_query($koneksi, $query)){
105             if($result)
106             {
107                 $response=array(
108                     'status' => 1,
109                     'message' =>'Update Success'
110                 );
111             }
112             else
113             {
114                 $response=array(
115                     'status' => 0,
116                     'message' =>'Update Failed'
117                 );
118             }
119         }else{
120             $response=array(
121                 'status' => 0,
122                 'message' =>'Wrong Parameter',
123                 'data'=> $id,
124                 'query'=>$query
125             );
126         }
127         header('Content-Type: application/json');
128         echo json_encode($response);
129     }
```

Fungsi **delete_user**

```
129     function delete_user()
130     {
131         global $koneksi;
132         $id = $_GET['id'];
133         $query = "DELETE FROM user_detail WHERE id=$id";
134         if(mysqli_query($koneksi, $query))
135         {
136             $response=array(
137                 'status' => 1,
138                 'message' =>'Delete Success'
139             );
140         }
141         else
142         {
143             $response=array(
144                 'status' => 0,
145                 'message' =>'Delete Fail.',
146                 'message'=> $query
147             );
148         }
149         header('Content-Type: application/json');
150         echo json_encode($response);
151     }
152     ?>
```

Buka aplikasi postman dan coba jalankan kode tersebut.

Get User

Overview | POST http://localhost/crud/i | GET http://localhost/crud/n | + | ... | No Environment

http://localhost/crud/native/api.php?function=get_user

GET | http://localhost/crud/native/api.php?function=get_user | Send

Params | Authorization | Headers (6) | Body | Pre-request Script | Tests | Settings | Cookies

Query Params

	KEY	VALUE	DESCRIPTION	...	Bulk Edit
<input checked="" type="checkbox"/>	function	get_user			
	Key	Value	Description		

Body | Cookies | Headers (7) | Test Results

200 OK | 101 ms | 1.78 KB | Save Response

Pretty | Raw | Preview | Visualize | JSON |

```

1 {
2   "status": 1,
3   "message": "Success",
4   "data": [
5     {
6       "id": "1",
7       "user_email": "admin@mail.com",
8       "user_password": "12344321",
9       "user_fullname": "administrator",
10      "level": "1"

```

Update User

Sebelum update

```

82 {
83   "id": "14",
84   "user_email": "api@mail.com",
85   "user_password": "123456",
86   "user_fullname": "api",
87   "level": "2"
88 },

```

id	user_email	user_password	user_fullname	level
1	admin@mail.com	12344321	administrator	1
2	user1@mail.com	12344321	user 1a	2
3	user3@mail.com	123456	user3	2
4	user4@mail.com	123456	user4	2
5	user@mail.id	123456	userrrrr	2
6	halo@mail.com	123456	halo	2
7	hei@mail.com	123	hei	2
8	hei@mail.com	123	hei	2
9	admin2@mail.com	123456	adminnnnn	2
10	admin2@mail.com	123456	adminnnnn	2
11	hei@mail.com	123	hehei	2
14	api@mail.com	123456	api	2
15	halo@mail.com	123	asd	2
16	halo@mail.com	123	qwes	2
31	tes123@mail.com	tes123	newuser	2

Setelah update

GET ▼ http://localhost/crud/native/api.php?function=update_user&id=14&email=api@mail.com&password=1234 Send ▼

Params ● Authorization Headers (6) Body Pre-request Script Tests Settings Cookies

KEY	VALUE	DESCRIPTION
<input checked="" type="checkbox"/> function	update_user	
<input checked="" type="checkbox"/> id	14	
<input checked="" type="checkbox"/> email	api@mail.com	
<input checked="" type="checkbox"/> password	123456	
<input checked="" type="checkbox"/> name	apissss	
Key	Value	Description

Body Cookies Headers (7) Test Results 200 OK 47 ms 286 B Save Response ▼

Pretty Raw Preview Visualize JSON ▼ ↻

```

1
2  "status": 1,
3  "message": "Update Success"
4

```

14	api@mail.com	123456	apissss	2
----	--------------	--------	---------	---

Delete User

Sebelum Delete

id	user_email	user_password	user_fullname	level
1	admin@mail.com	12344321	administrator	1
2	user1@mail.com	12344321	user 1a	2
3	user3@mail.com	123456	user3	2
4	user4@mail.com	123456	user4	2
5	user@mail.id	123456	userrrrr	2
6	halo@mail.com	123456	halo	2
7	hei@mail.com	123	hei	2
8	hei@mail.com	123	hei	2
9	admin2@mail.com	123456	adminnnnn	2
10	admin2@mail.com	123456	adminnnnn	2
11	hei@mail.com	123	hehei	2
14	api@mail.com	123456	apissss	2
15	halo@mail.com	123	asd	2
16	halo@mail.com	123	qwes	2
31	tes123@mail.com	tes123	newuser	2

Setelah Delete

http://localhost/crud/native/api.php?function=delete_user&id=10

GET http://localhost/crud/native/api.php?function=delete_user&id=10

Params Authorization Headers (6) Body Pre-request Script Tests Settings Cookies

Query Params

	KEY	VALUE	DESCRIPTION	...	Bulk Edit
<input checked="" type="checkbox"/>	function	delete_user			
<input checked="" type="checkbox"/>	id	10			
	Key	Value	Description		

Body Cookies Headers (7) Test Results 200 OK 31 ms 286 B Save Response

Pretty Raw Preview Visualize JSON

```
1 {
2   "status": 1,
3   "message": "Delete Success"
4 }
```

Query = 0

1 SELECT * FROM user_detail WHERE id = 10

user_detail (0r x 5c)

id	user_email	user_password	user_fullname	level
1	admin@mail.com	12344321	administrator	1
2	user1@mail.com	12344321	user 1a	2
3	user3@mail.com	123456	user3	2
4	user4@mail.com	123456	user4	2
5	user@mail.id	123456	userrrrr	2
6	halo@mail.com	123456	halo	2
7	hei@mail.com	123	hei	2
8	hei@mail.com	123	hei	2
9	admin2@mail.com	123456	adminnnnn	2
11	hei@mail.com	123	hehei	2
14	api@mail.com	123456	apissss	2
15	halo@mail.com	123	asd	2
16	halo@mail.com	123	qwes	2
31	tes123@mail.com	tes123	newuser	2

f. Hasil dan Pembahasan

1. Berdasarkan konsep tersebut buatlah sebuah API untuk insert data

Contoh

Sebelum insert

id	user_email	user_password	user_fullname	level
1	admin@mail.com	12344321	administrator	1
2	user1@mail.com	12344321	user 1a	2
3	user3@mail.com	123456	user3	2
4	user4@mail.com	123456	user4	2
5	user@mail.id	123456	userrrrr	2
6	halo@mail.com	123456	halo	2
7	hei@mail.com	123	hei	2
8	hei@mail.com	123	hei	2
9	admin2@mail.com	123456	adminnnnn	2
11	hei@mail.com	123	hehei	2
14	api@mail.com	123456	apissss	2
15	halo@mail.com	123	asd	2
16	halo@mail.com	123	qwes	2
31	tes123@mail.com	tes123	newuser	2

Setelah insert

url :

http://localhost/crud/native/api.php?function=input_user&email=api2@mail.com&password=123456&name=apiv2

Params ● Authorization Headers (6) Body Pre-request Script Tests Settings Cookies

Query Params

	KEY	VALUE	DESCRIPTION	...	Bulk Edit
<input checked="" type="checkbox"/>	function	input_user			
<input checked="" type="checkbox"/>	email	api2@mail.com			
<input checked="" type="checkbox"/>	password	123456			
<input checked="" type="checkbox"/>	name	apiv2			
	Key	Value	Description		

Body Cookies Headers (7) Test Results 200 OK 36 ms 393 B Save Response

Pretty Raw Preview Visualize JSON

```
1 {
2   "status": 1,
3   "message": "INSERT INTO user_detail (user_email, user_password, user_fullname, level) VALUES
4     ('api2@mail.com', '123456', 'apiv2', 2)"
}
```

31	tes123@mail.com	tes123	newuser	2
32	api2@mail.com	123456	apiv2	2

2. Buatlah laporan kegiatan serta pembahasan dari baris kode dari poin e dan f.

g. Kesimpulan

Mahasiswa memahami mengenai definisi dan penerapan inheritance.

h. Rubrik Penilaian

No	Indikator	Skor*			
		1	2	3	4
1	Ketepatan waktu dan ketepatan dalam menjelaskan dari tugas ditunjang dengan bukti referensi	1	2	3	④
2	Ketepatan waktu dan ketepatan dalam menjelaskan dari tugas	1	2	③	4
3	Ketepatan waktu akan tetapi kurang tepat dalam menjelaskan tugas	1	②	3	4
4	Keterlambatan pengumpulan tugas dan ketidaktepatan dalam menjelaskan tugas	①	2	3	4
Jumlah skor					