

Pengembangan Aplikasi Web

Pertemuan Ke-9 (Sistem Basisdata dan Aplikasi Web 2)

Noor Ifada

Email: noor.ifada@trunojoyo.ac.id

Scopus: [56590032100](#)

Google Scholar: [Noor Ifada](#)

ResearchGate: [Noor-Ifada](#)

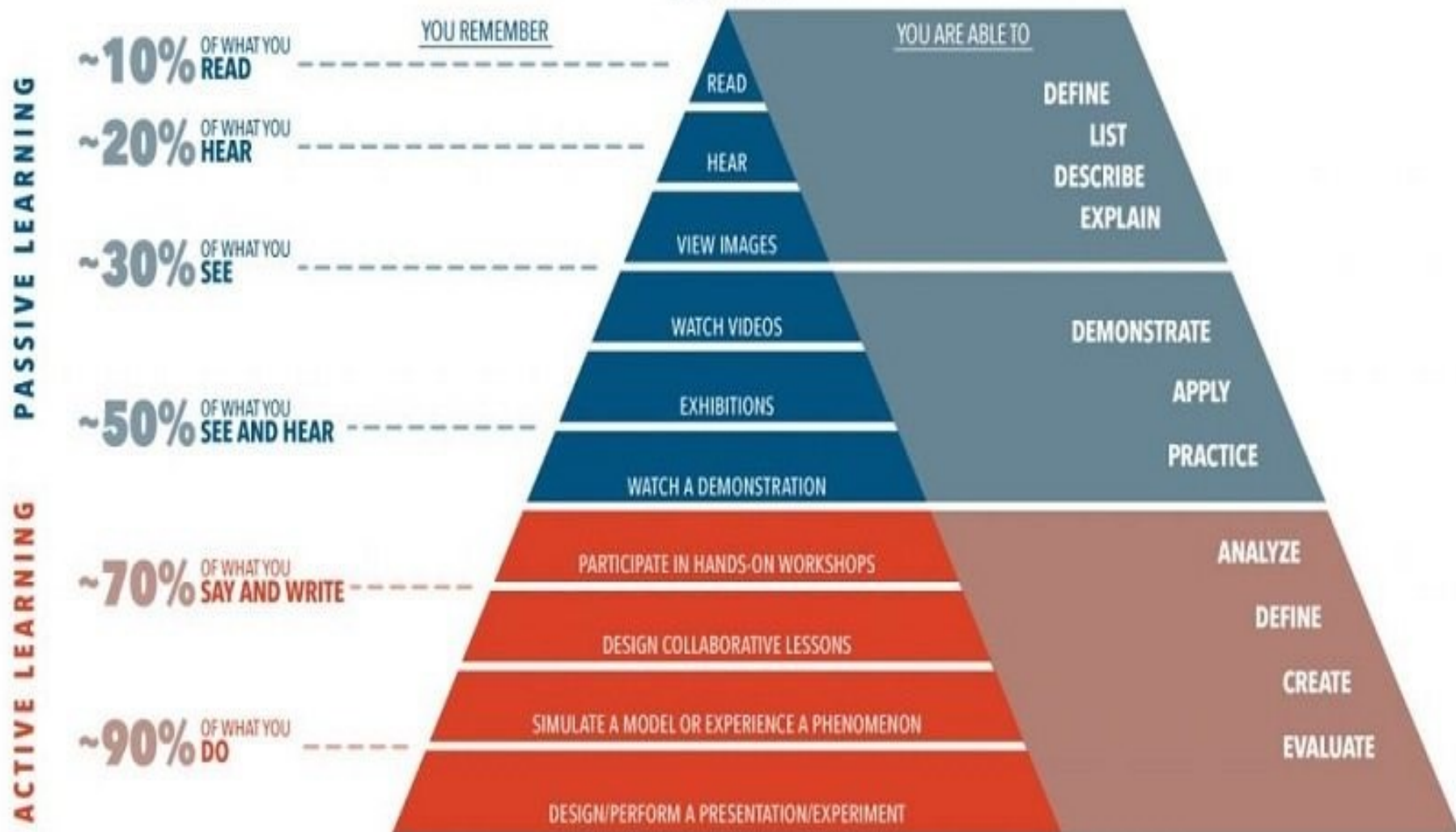
Repository: [Trunojoyoan](#)

Semester Gasal 2023/2024

S1 Teknik Informatika – Universitas Trunojoyo Madura (UTM)

CONE OF EXPERIENCE

EDGAR DALE



<https://elearningindustry.com/>

SOFT SKILLS FOR STUDENTS

6 SKILLS TO HELP YOU SUCCEED



START

1 Problem Solving

Do you see problems as interesting opportunities? Problem solvers anticipate potential stumbling blocks and act to prevent them or mitigate their effects.

TIP: You don't always need to start by trying to solve the problem. First, aim to understand the root of the problem.



2 Creativity

Are you able to think outside of the box even when you're not asked to? Everyone has creative abilities. Creative thinking skills help you to look at problems and situations from a fresh perspective.



3 Communication

Are you an effective communicator and active listener? Communication skills will help you understand others and be better understood in return. This can help make each interaction you have in both your work and social life a more positive experience.



4 Time Management

Are you an organized person who meets deadlines? Good time management skills enable you to do more in less time, helping you reduce stress and maintain a better work-life balance.

TIP: Prioritize your tasks and delegate a time limit to how long you spend on each one.



5 Stress Management

Can you identify and tackle your stress triggers? Being able to manage stress allows you to break the hold it can have on your life. This will make you happier, healthier, and more productive in return.

TIP: Set limits and learn to say no to requests that would create excessive stress in your life.



6 Teamwork

Are you a team player who collaborates well with others? Teamwork requires leadership and goal orientation. Whether in school or a job, the better you work within a team, the better your work will be!

TIP: Always clarify roles, responsibilities and accountability with your team members.



END

 **educations.com**

You won't always be a priority to others,
and that's why you have to be a priority to yourself.


Learn to respect yourself, take care of yourself,
and become your own support system.

Your needs matter. Start meeting them. Don't wait
for others to choose you. Choose yourself.

Jazz Zo Marcellus

Tabu Bagi Mahasiswa Teknik Informatika

- ❖ Tidak dapat beradaptasi dengan (perkembangan) teknologi
- ❖ Tidak dapat membaca atau memahami instruksi
- ❖ Tidak dapat membuat program



**LEARNING IS NEVER
DONE WITHOUT
ERRORS AND DEFEAT**

VLADIMIR LENIN

PICTUREQUOTES.com

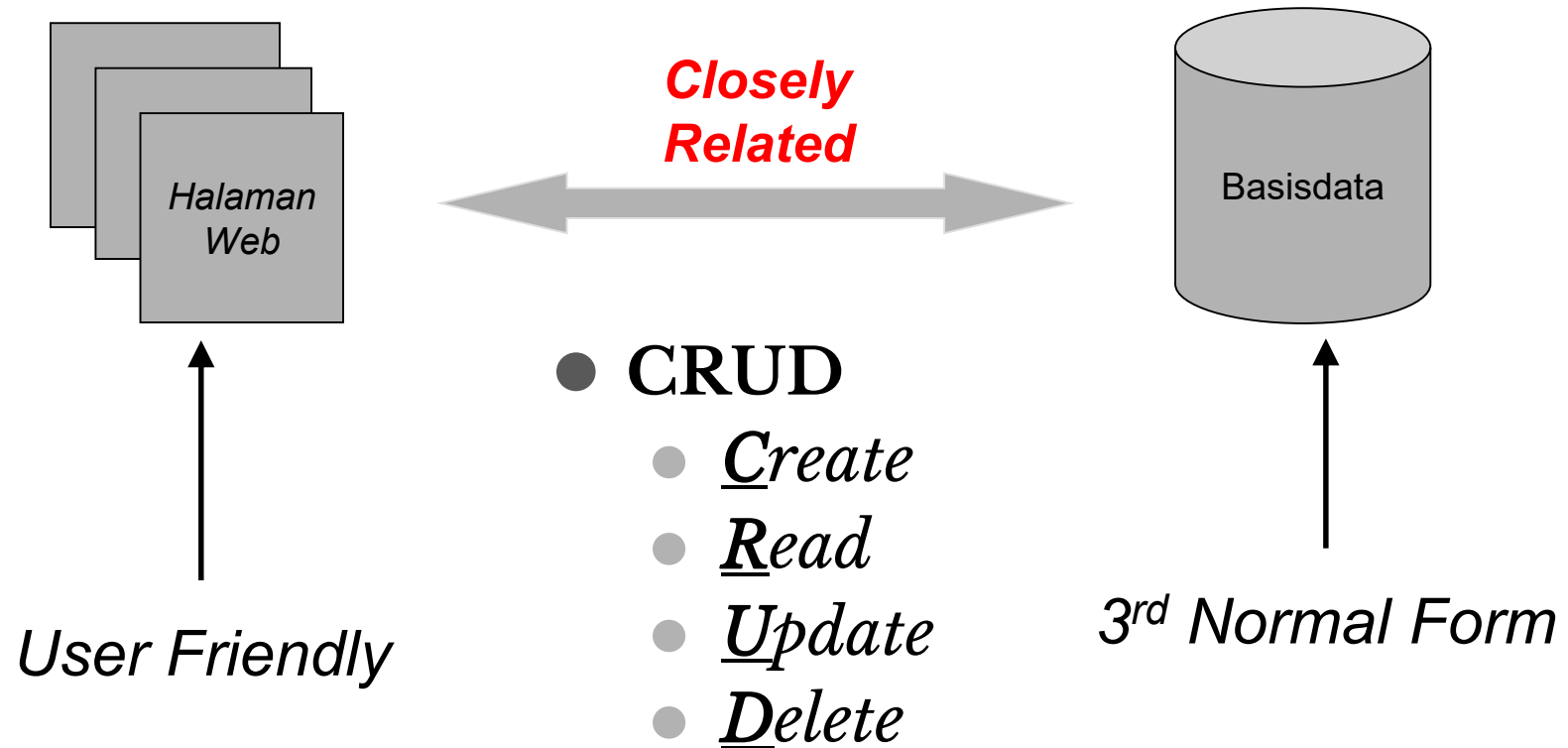


PICTUREQUOTES

Sub Pokok Bahasan

- Aplikasi Web & Implementasi Basisdata
 - PHP *Data Objects* (PDO)
 - Koneksi Basisdata – Halaman *Web*
 - PDO *Query*
 - Serangan SQL *Injection*
 - PDO *Prepared Statement*, INSERT, UPDATE & DELETE
 - Menampilkan Pesan *Error*

Aplikasi Web & Implementasi Basisdata



PHP *Data Objects* (PDO)

<http://php.net/manual/en/book.pdo.php>

- Merupakan *Object-Oriented extension library* → tersedia pada PHP versi 5.1 dan seterusnya
- Digunakan untuk melakukan akses ke sistem basisdata

PDO

PDO support	enabled
PDO drivers	mysql, sqlite

pdo_mysql

PDO Driver for MySQL	enabled
Client API version	mysqlnd 5.0.12-dev - 20150407 - \$Id: b396954eeb2d1d9ed7902b8bae237b287f21ad9e \$

Koneksi Basisdata – Halaman Web

<http://id1.php.net/manual/en/pdo.connections.php>

```
1 <?php
2 $dbc = new PDO('mysql:host=localhost;dbname=customerdb','root','');
3
4 // Use the connection ...
5
6 ?>
```

Sistem Basisdata

Nama *host*

Nama basisdata

Username basisdata

Password

PDO bukanlah satu-satunya metode untuk mengkoneksikan PHP dengan sistem basisdata (MySQL)

Alternatif lain: MySQLi (*Object-oriented*), MySQLi (*Procedural*)



PDO Query

```
1 <?php
2     $dbc = new PDO('mysql:host=localhost;dbname=customerdb','root','');
3
4     $statement = $dbc->query("SELECT firstname, address FROM customer WHERE balance > 0");
5
6     foreach ($statement as $row)
7     {
8         echo "<h1>{$row['firstname']}</h1>";
9         echo "<p>{$row['address']}</p>";
10    }
11 ?>
```

Almira

Jl. Mawar No. 123, Surabaya

Baharudin

Jl. Mengkudu No. 456, Surabaya

Serangan SQL Injection

← → ↻ ⓘ localhost/2017paw/Week05/form_seranganSQLInjection.html

Customer ID:

← → ↻ ⓘ localhost/2017paw/Week05/seranganSQLInjection.php?customerID=2&find=Find

Baharudin

Jl. Mengkudu No. 456, Surabaya

```
1 <?php
2 $dbc = new PDO('mysql:host=localhost;dbname=customerdb','root','');
3
4 $statement = $dbc->query("SELECT firstname, address FROM customer WHERE customerID = {$_GET['customerID']}");
5
6 foreach ($statement as $row)
7 {
8     echo "<h1>{$row['firstname']}</h1>";
9     echo "<p>{$row['address']}</p>";
10 }
11 ?>
```



SELECT firstname, address FROM customer WHERE customerID = 2 OR true

Challenge #1

Buatlah *form* (tampilan pada slide #9) yang digunakan untuk menampilkan data tabel “customer” berdasarkan nilai “customer ID” dimana nilai dari atribut ***action*** adalah “***seranganSQLinjection.php***” dan atribut ***method*** adalah “GET”.

(nama file: ***form_seranganSQLinjection.html***)

Buatlah file PHP (skrip pada slide #9) untuk memproses/menampilkan isi masukan *form*
(nama file: ***seranganSQLinjectionQuery.php***)

PDO Prepared Statement

<http://php.net/manual/en/pdo.prepared-statements.php>

```
1 <?php
2     $dbc = new PDO('mysql:host=localhost;dbname=customerdb','root','');
3
4     $statement = $dbc->prepare("SELECT firstname, address FROM customer WHERE customerID = :customerID");
5     $statement->bindValue(':customerID', $_GET['customerID']);
6     $statement->execute();
7
8     foreach ($statement as $row)
9     {
10         echo "<h1>{$row['firstname']}</h1>";
11         echo "<p>{$row['address']}</p>";
12     }
13 ?>
```



```
SELECT firstname, address FROM customer WHERE customerID = 2 OR true
```

Challenge #2

Ubahlah file PHP (skrip pada slide #11) yang digunakan untuk memproses/menampilkan isi masukan *form* (Challenge #1) **agar menerapkan konsep PDO *Prepared Statement***

(nama file:

`seranganSQLinjectionPreparedStm.php`)

Apa perbedaan hasil dari Challenge #1 dan #2?

PDO Prepared Statement: INSERT

Customer Data

Firstname:

Address

```
<?php
```

```
$dbc = new PDO('mysql:host=localhost;dbname=customerdb','root','');

$stmt = $dbc->prepare("INSERT INTO customer (firstname, address, balance)
VALUES (:firstname, :address, :balance)");
$stmt->bindValue(':firstname', $_GET['firstname']);
$stmt->bindValue(':address', $_GET['address']);
$stmt->bindValue(':balance', 0);
$stmt->execute();
```

```
?>
```

+ Options

		customerID	firstname	address	balance
<input type="checkbox"/>	Edit Copy Delete	1	Almira	Jl. Mawar No. 123, Surabaya	4500000
<input type="checkbox"/>	Edit Copy Delete	2	Baharudin	Jl. Mengkudu No. 456, Surabaya	1200000
<input type="checkbox"/>	Edit Copy Delete	3	Citra	Jl. Cendana No. 17, Surabaya	0

Challenge #3

Buatlah *form* (tampilan pada slide #13) yang digunakan untuk mengisi data untuk kolom “firstname” dan “address” pada tabel “customer”

Buatlah file PHP (skrip pada slide #13) untuk memproses/memasukkan isian form ke dalam tabel “customer”

PDO *Prepared Statement*: UPDATE, DELETE

```
<?php
```

```
$dbc = new PDO('mysql:host=localhost;dbname=customerdb','root','');

$stmt = $dbc->prepare("UPDATE customer SET firstname = :firstname, address = :address
                        WHERE customerID = :customerID") ;
$stmt->bindValue(':firstname', $_GET['firstname']);
$stmt->bindValue(':address', $_GET['address']);
$stmt->bindValue(':customerID', $_GET['customerID']);
$stmt->execute();
```

```
?>
```

```
<?php
```

```
$dbc = new PDO('mysql:host=localhost;dbname=customerdb','root','');

$stmt = $dbc->prepare("DELETE FROM customer WHERE customerID = :customerID") ;
$stmt->bindValue(':customerID', $_GET['customerID']);
$stmt->execute();
```

```
?>
```

Challenge #4

Buatlah *form* yang digunakan untuk mengubah data untuk kolom “firstname” dan “address” dari seorang “customerID” pada tabel “customer”

Buatlah file PHP (skrip pada slide #15) untuk mengubah data dari seorang “customer ID” pada tabel “customer” berdasarkan isian form

Challenge #5

Lakukan penghapusan data dari seorang “customerID” pada tabel “customer” (skrip PHP ada pada slide #15)

Menampilkan Pesan *Error*

```
<?php
try
{
    $dbc = new PDO('mysql:host=localhost;dbname=customerdb','root','');

    $dbc->setAttribute(PDO::ATTR_ERRMODE, PDO::ERRMODE_EXCEPTION);

    $statement = $dbc->prepare("INERT IN ccustomer (fffirsrname, aaaddress, bbbalance)
                                VALUES (:firstname, :address, :balance)");
    $statement->bindValue(':firstname', $_GET['firstname']);
    $statement->bindValue(':address', $_GET['address']);
    $statement->bindValue(':balance', 0);
    $statement->execute();
}
catch (PDOException $err)
{
    echo $err->getMessage();
}
?>
```

SQLSTATE[42000]: Syntax error or access violation: 1064 You have an error in your SQL syntax; check the manual that corresponds to your MariaDB server version for the right syntax to use near 'INERT IN ccustomer (fffirsrname, aaaddress, bbbalance) VALUES ('Fahra' at line 1

- PDO *Error Mode* secara *default* adalah **ERRMODE_SILENT** (*silently ignore all database errors*)

Challenge #6

Perbaharui file PHP pada Challenge #3 agar dapat menampilkan pesan *error*

Video Perkuliahan

- Penjelasan materi kuliah dapat dilihat via YouTube (*recording* Semester Gasal 2020/2021):
<https://youtu.be/GzhWF1zne18> mulai dari *timestamp* 09:07
- *Note: Kerjakan Challenge(s) berdasarkan slide Semester Gasal 2023/2024 (bukan berdasarkan slide yang ditampilkan dalam recording Semester Gasal 2020/2021)*



there is
ALWAYS
something to
BE GRATEFUL
for



whilehowsnapping.com

**SURROUND
YOURSELF
WITH POSITIVE
PEOPLE WHO
ARE GOING TO
PUSH YOU
TOWARD
GREATNESS.**

PictureQuotes.com