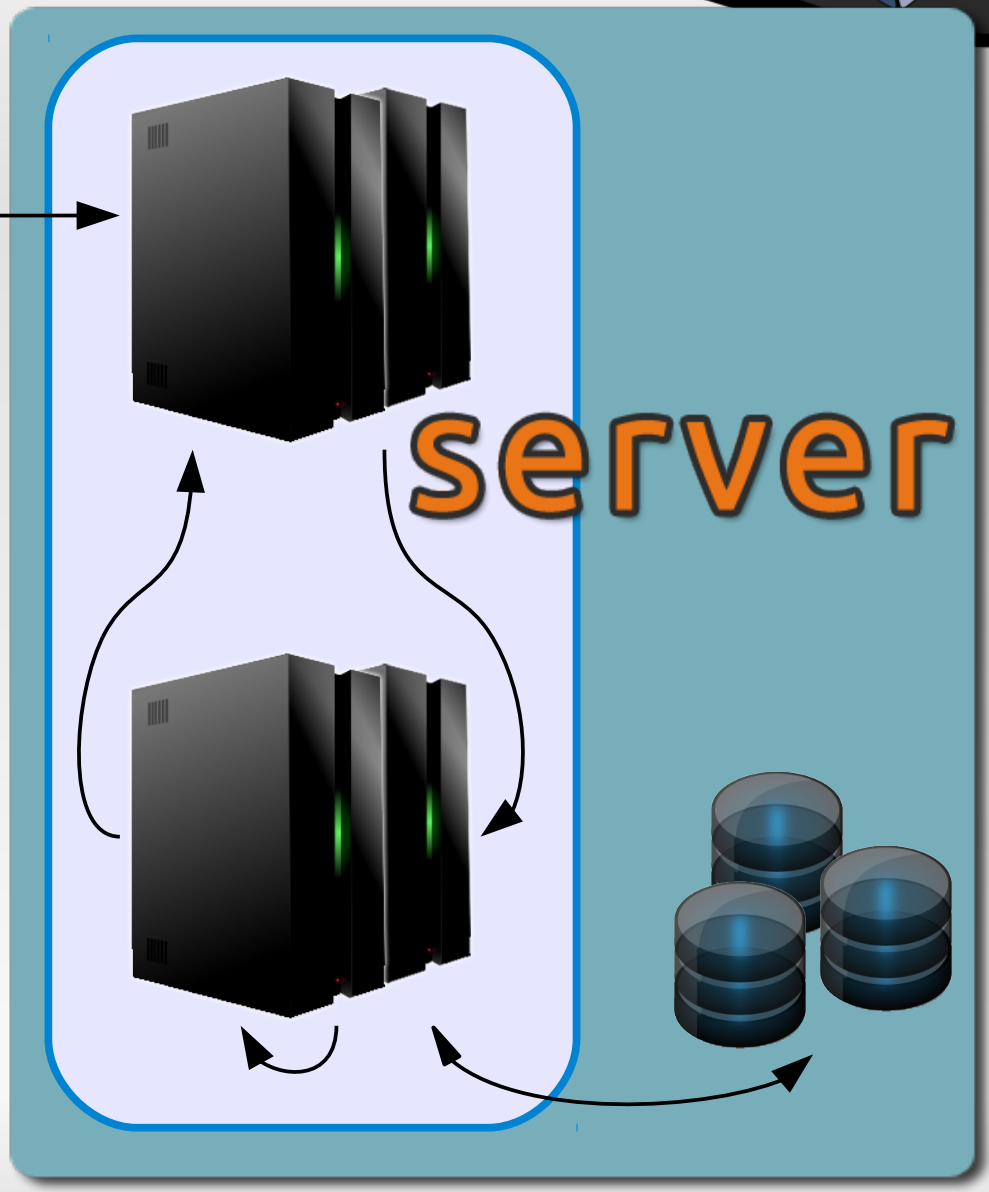
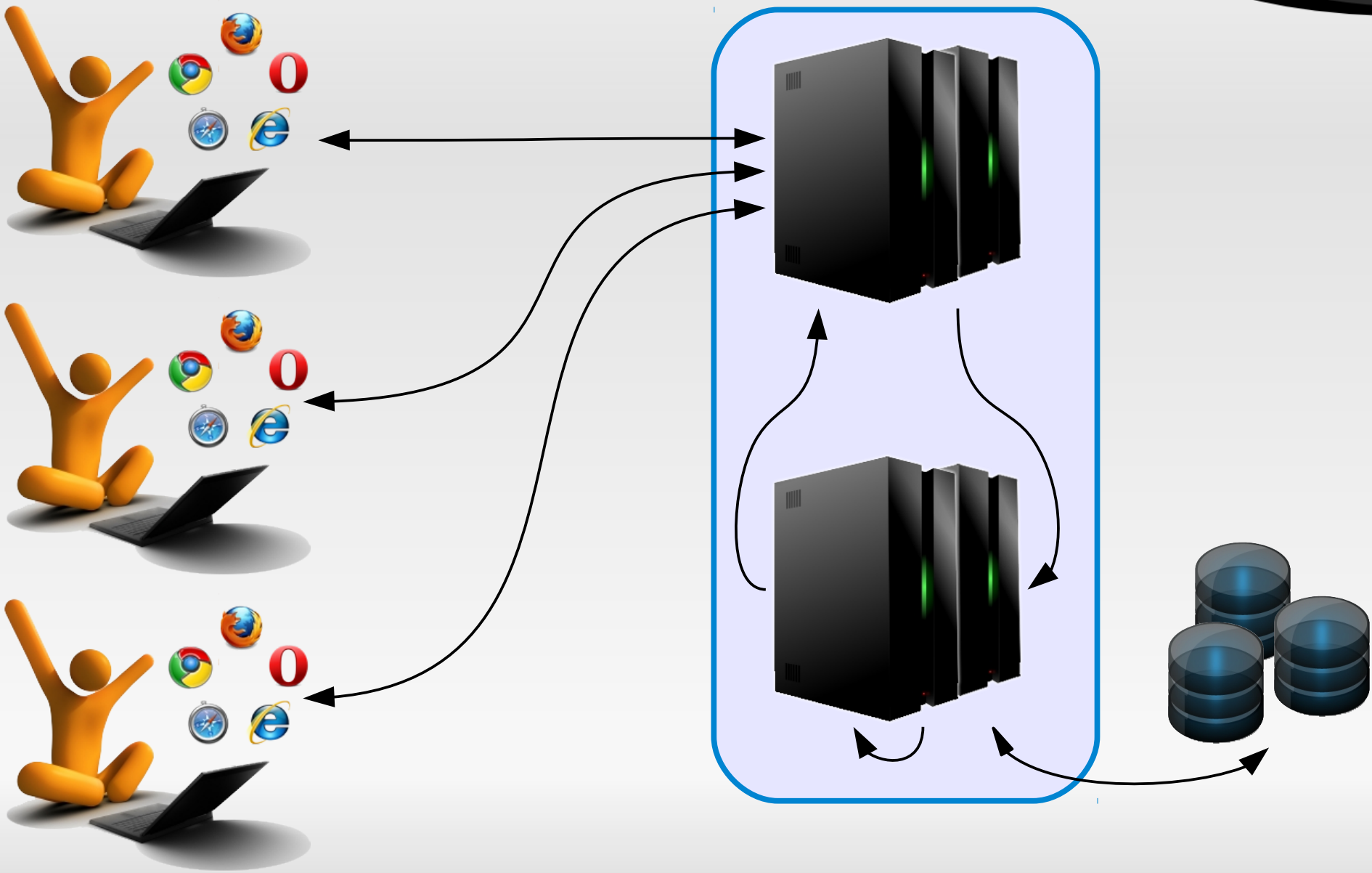
PART II

The Internet



The Internet



Dynamic Contents

Communicate with user

Dynamic Contents

Communicate with user

Remember user's data

Dynamic Contents

Communicate with user

Remember user's data

Differentiate users

Working example – Forum

Communicate with user

Communicate with user

Html forms

Html forms

```
<form action="queries.php" method="POST">
        <div><label for="username">Username</label>
             <input type="text" name="username" id="username" /></div>
        <div><label for="password">Password</label>
             <input type="password" name="password" id="password" /></div>
        <div><input type="submit" value="Login" /></div>
        <div><input type="hidden" name="loginForm" value="" /></div>
</form>
```

Html forms – action

Page handling the request

```
<form action="queries.php" method="POST">
        <div><label for="username">Username</label>
            <input type="text" name="username" id="username" /></div>
        <div><label for="password">Password</label>
            <input type="password" name="password" id="password" /></div>
        <div><input type="submit" value="Login" /></div>
        <div><input type="hidden" name="loginForm" value="" /></div>
</form>
```

Html forms – method

Request method

```
<form action="queries.php" method="POST">
        <div><label for="username">Username</label>
            <input type="text" name="username" id="username" /></div>
        <div><label for="password">Password</label>
            <input type="password" name="password" id="password" /></div>
        <div><input type="submit" value="Login" /></div>
        <div><input type="hidden" name="loginForm" value="" /></div>
</form>
```

POST

Html forms – method

Request method

```
<form action="queries.php" method="POST">
        <div><label for="username">Username</label>
            <input type="text" name="username" id="username" /></div>
        <div><label for="password">Password</label>
            <input type="password" name="password" id="password" /></div>
        <div><input type="submit" value="Login" /></div>
        <div><input type="hidden" name="loginForm" value="" /></div>
</form>
```

POST vs GET

Html forms – inputs

Handle user inputs

```
<form action="queries.php" method="POST">
        <div><label for="username">Username</label>
            <input type="text" name="username" id="username" /></div>
        <div><label for="password">Password</label>
            <input type="password" name="password" id="password" /></div>
        <div><input type="submit" value="Login" /></div>
        <div><input type="hidden" name="loginForm" value="" /></div>
</form>
```

text

Html forms – inputs

Handle user inputs

```
<form action="queries.php" method="POST">
        <div><label for="username">Username</label>
            <input type="text" name="username" id="username" /></div>
        <div><label for="password">Password</label>
            <input type="password" name="password" id="password" /></div>
        <div><input type="submit" value="Login" /></div>
        <div><input type="hidden" name="loginForm" value="" /></div>
</form>
```

text

password

Html forms – inputs

Handle user inputs

```
<form action="queries.php" method="POST">
        <div><label for="username">Username</label>
            <input type="text" name="username" id="username" /></div>
        <div><label for="password">Password</label>
            <input type="password" name="password" id="password" /></div>
        <div><input type="submit" value="Login" /></div>
        <div><input type="hidden" name="loginForm" value="" /></div>
</form>
```

text

checkbox

password

radio

Html forms – inputs

Handle user inputs

```
<form action="queries.php" method="POST">
        <div><label for="username">Username</label>
            <input type="text" name="username" id="username" /></div>
        <div><label for="password">Password</label>
            <input type="password" name="password" id="password" /></div>
        <div><input type="submit" value="Login" /></div>
        <div><input type="hidden" name="loginForm" value="" /></div>
</form>
```

text

checkbox

hidden

password

radio

other

Html forms – submit

Submit the form

```
<form action="queries.php" method="POST">
        <div><label for="username">Username</label>
             <input type="text" name="username" id="username" /></div>
        <div><label for="password">Password</label>
             <input type="password" name="password" id="password" /></div>
        <div><input type="submit" value="Login" /></div>
        <div><input type="hidden" name="loginForm" value="" /></div>
</form>
```

Html forms – labels

Easy access to input fields

```
<form action="queries.php" method="POST">
        <div><label for="username">Username</label>
             <input type="text" name="username" id="username" /></div>
        <div><label for="password">Password</label>
             <input type="password" name="password" id="password" /></div>
        <div><input type="submit" value="Login" /></div>
        <div><input type="hidden" name="loginForm" value="" /></div>
</form>
```

Forms – PHP part

$_POST

$_GET

Forms – PHP part

$_POST

$_GET

} Arrays with submitted data

Forms – PHP part

$_POST

$_GET

} Arrays with submitted data

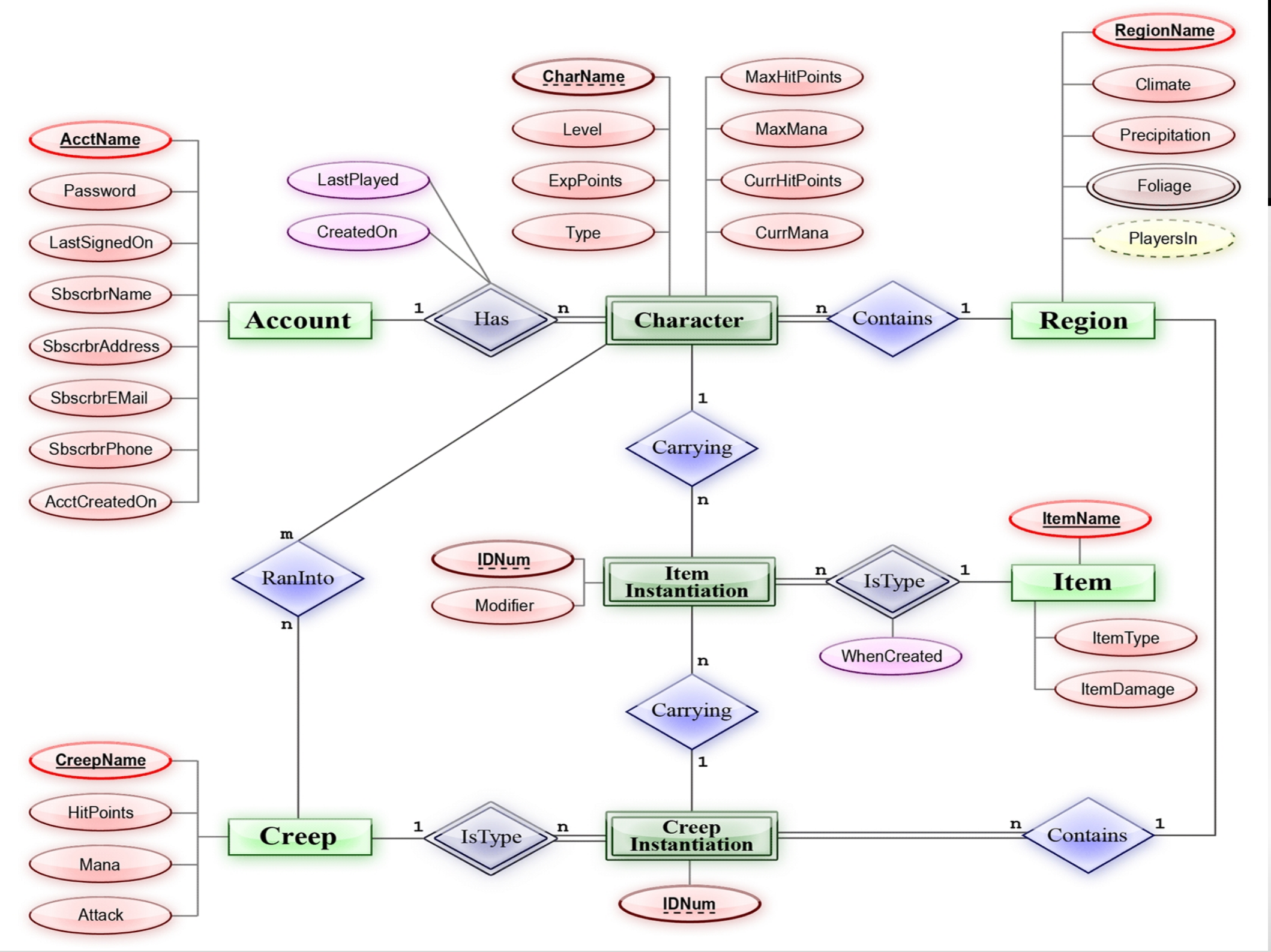
Index input elements by their names

Demo

Remember user's data

Remember user's data

Database


RegionName
Climate
Precipitation
Foliage
PlayersIn
CharName
MaxHitPoints
Level
MaxMana
ExpPoints
CurrHitPoints
Type
CurrMana
AcctName
Password
LastSignedOn
SbscrbrName
SbscrbrAddress
SbscrbrEMail
SbscrbrPhone
AcctCreatedOn
LastPlayed
CreatedOn
Account
1
Has
n
Character
n
Contains
1
Region
1
Carrying
n
m
RanInto
n
IDNum
Modifier
Item Instantiation
n
IsType
1
Item
ItemName
ItemType
ItemDamage
WhenCreated
n
Carrying
1
CreepName
HitPoints
Mana
Attack
Creep
1
IsType
n
Creep Instantiation
n
Contains
1
IDNum

Structured **Q**uery **L**anguage

SQL

```
SELECT isbn,
       title,
       price,
       price * 0.06 AS sales_tax
  FROM Book
 WHERE price > 100.00
 ORDER BY title;
```

SQL – PHP part

PHP Data **O**bjects (PDO)

PDO

lightweight

consistent interface

for accessing databases

PDO – Classes

PDO

PDO – Classes

PDO

PDOStatement

PDO – Classes

PDO

PDOStatement

PDOException

PDO – Database Connection

```
$db = new PDO (

"mysql:host=$db_host;dbname=
$db_name;charset=UTF-8",

    $db_user,
    $db_pass
);
```

Statement with **variables**

Prepared Statements

Statement with **variables**

Parsed, Compiled, Optimized **once**

Prepared Statements

Statement with **variables**

Parsed, Compiled, Optimized **once**

Executed **many times**

Prepared Statements

Statement with **variables**

Parsed, Compiled, Optimized **once**

Executed **many times**

SQL injection **safe**

Prepared Statements

Statement with **variables**

Parsed, Compiled, Optimized **once**

Executed **many times**

SQL injection **safe**

Fewer resources -> **Faster**

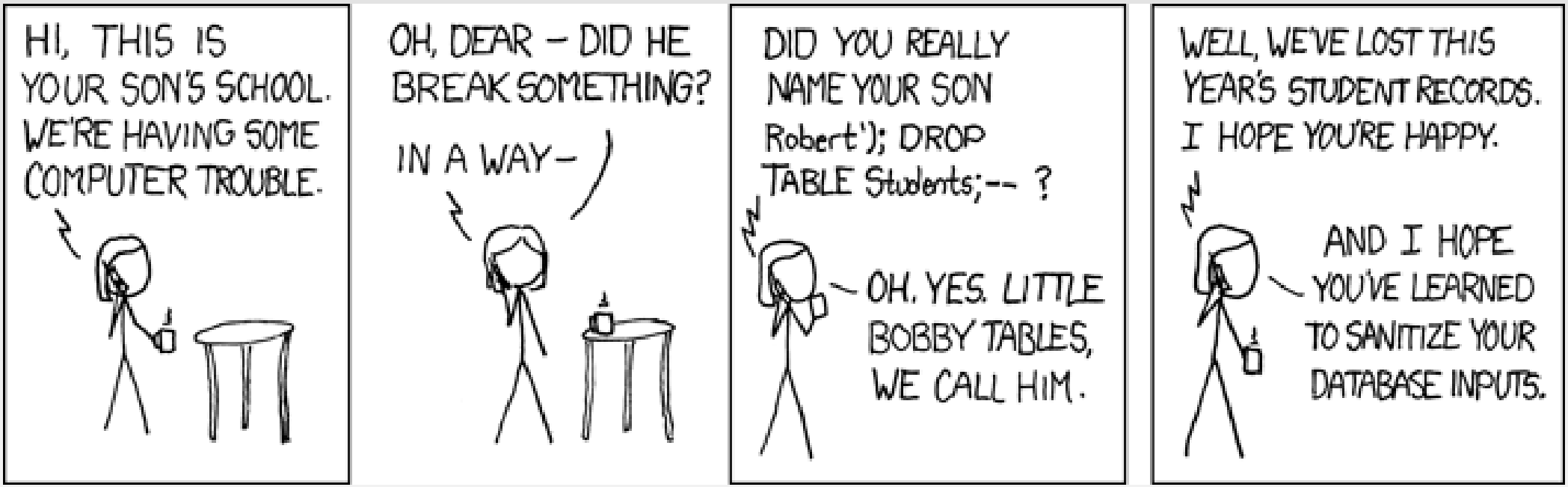
PDO – Queries

```
$st = $db->prepare
("SELECT * FROM lists WHERE
uID=:uID");

$st->execute
( array(':uID' => $userID) );

$st->fetchAll
(PDO::FETCH_CLASS, "MyList");
```

SQL Injections



xkcd.com

Demo

Differentiate users

Differentiate users

sessions

HTTP is Stateless

Forgets user data after each request

Session-id per user

Session

Session-id per user

Stored in a cookie

Session

Session-id per user

Stored in a cookie

Bind variables to session-id

Session

Session-id per user

Stored in a cookie

Bind variables to session-id

Stored in server

Session

Session-id per user

Stored in a cookie

Bind variables to session-id

Stored in server

Access them from different pages

Session – PHP part

session_start () - in each page
(before **ANY** output)

session_destroy () - clear data

Session – PHP part

session_start () - in each page
(before **ANY** output)

session_destroy () - clear data

$_SESSION - array with the
actual data

Demo

Questions

References

http://www.php.net/manual/

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

http://www.php.net/manual/en/book.session.php

http://dev.mysql.com/doc/refman/5.6/en/index.html

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