

Laboratorio Progettazione Web

Modello di applicazione Web

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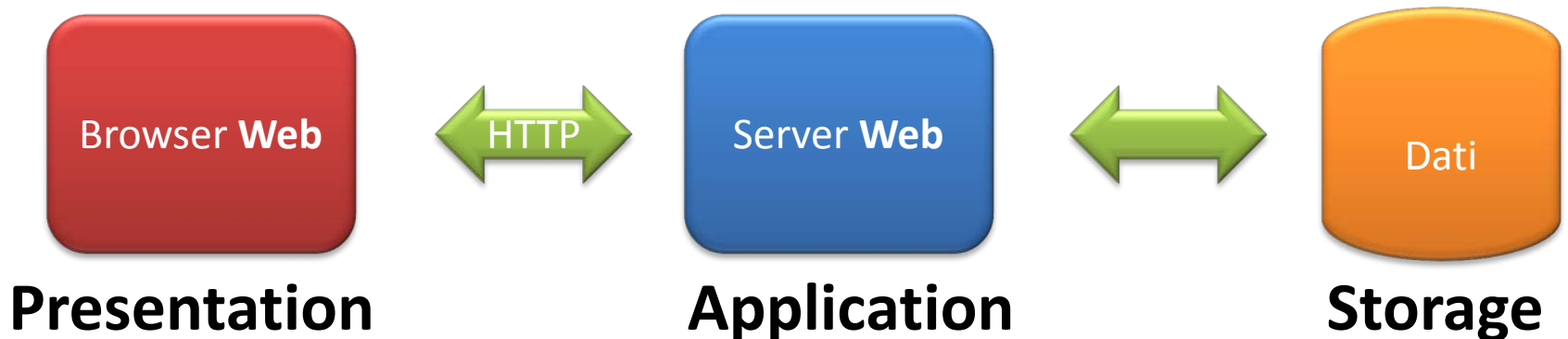
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1. Libreria per accedere al DB Mysql
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3. Scheletro HTML+Javascript per invocare la API restful

Livelli (Tiers) di un'applicazione web



Libreria Mysql

```
// selectSF.php
```

```
include("dbLibrary.php");  
$db = openDB("localhost", "root", NULL, "lpw");  
$sql="SELECT * FROM SanFrancisco";  
$records = select($db,$sql);  
closeDB($db);
```

```
//dbLibrary.php
```

```
openDB()  
select()  
closeDB()
```

Tabella SanFrancisco

#	Name	Type
1	Location_ID	varchar(14)
2	Business_Account_Number	int(6)
3	Ownership_Name	varchar(32)
4	DBA Name	varchar(38)
5	Street_Address	varchar(33)
6	City	varchar(15)
7	State	varchar(2)
8	Zip_Code	int(5)
9	Business_Start_Date	varchar(22)
10	Location Start Date	varchar(22)
11	Mail_Address	varchar(59)
12	Mail_City_State_Zip	varchar(33)
13	Class Code	int(1)
14	PBC Code	varchar(4)
15	Coordinates	varchar(39)
16	Latitude	varchar(18)
17	Longitude	varchar(19)



Application



Storage

<http://localhost/lpw/modello/mysql/selectSF.php>



Presentation



Application



Storage

selectSF.php

Tabella SanFrancisco

Recupero del parametro inviato in modalità GET

```
<?PHP
```

```
include("dbLibrary.php");
```

```
/* Recupero il parametro inviato con il metodo GET usando l'array associativo di sistema $_GET */
```

```
if(isset($_GET['zip'])) $zip = $_GET['zip'];
```

```
else $zip = "94109"; //valore di default
```

```
// Invoco il DB per recuperare le strutture definite con il parametro
```

```
$db = openDB("localhost", "root", $password, "lpw");
```

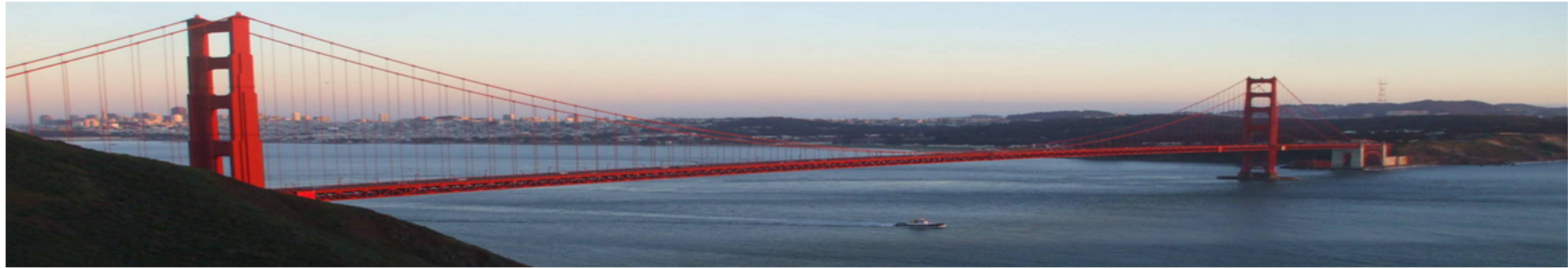
```
$records = select($db,"SELECT * FROM SanFrancisco WHERE zip_code='$zip'");
```

```
closeDB($db);
```

```
// Converto l'array in una stringa di formato json
```

```
echo(json_encode($records));
```

```
?>
```



San Francisco Accomodations

Zip Code selection 94102 94103 94104 94105 94107

Input

DBA_Name	Street_Address	City	State	Zip_Code	Mail_Address	Mail_City_State_Zip	Class_Code	PBC_Code	Latitude	Longitude
UNION SQUARE PLAZA HOTEL	432 GEARY ST	San Francisco	CA	94102	432 GEARY ST	SAN FRANCISCO CA 94102-1223	3	7096	37.787127334000445	-122.41035310099971
CHANCELLOR HOTEL	433 POWELL ST	San Francisco	CA	94102	433 POWELL ST	SAN FRANCISCO CA 94102-1503	3	7012	37.788672543000473	-122.40852327699969
100 LAGUNA APTS	100 LAGUNA ST	San Francisco	CA	94102	133 KEARNY ST STE 203	SAN FRANCISCO CA 94108-4809	3	5538	37.771928736000461	-122.42530626099972
MARINE MEMORIAL ASSN	609 SUTTER ST	San Francisco	CA	94102	609 SUTTER ST, SUITE 2M	SAN FRANCISCO CA 94102-1081	3	7000	37.788953700000491	-122.41046602399967
MARINE MEMORIAL ASSN	609 SUTTER ST	San Francisco	CA	94102	609 SUTTER ST, SUITE 2M	SAN FRANCISCO CA 94102-1081	3	7000	37.788953700000491	-122.41046602399967
OPERA PLAZA APT	1 OPERA PLAZA	San Francisco	CA	94102	4444 GEARY BLVD #100	SAN FRANCISCO CA 94118-3040	3	5538	37.780459112000472	-122.41763739599969
225 JONES APTS	225 JONES ST	San Francisco	CA	94102	141 JULIAN AV	SAN FRANCISCO CA 94103-3410	3	6511	37.783393940000451	-122.41252284699971
225 JONES BLDG	225 JONES ST	San Francisco	CA	94102	141 JULIAN AV	SAN FRANCISCO CA 94103-3410	3	6511	37.783393940000451	-122.41252284699971
147-151 PAGE APTS	147 PAGE ST	San Francisco	CA	94102	175 ROLPH ST	SAN FRANCISCO CA 94112-3726	3	5538	37.773953295000467	-122.42321602199968
METROPOLITAN CLUB	640 SUTTER ST	San Francisco	CA	94102	640 SUTTER ST	SAN FRANCISCO CA 94102-1018	3	7000	37.788937568000449	-122.41107327599968

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[see demo!!!](#)

#zip

Select Zip code

94102 94103

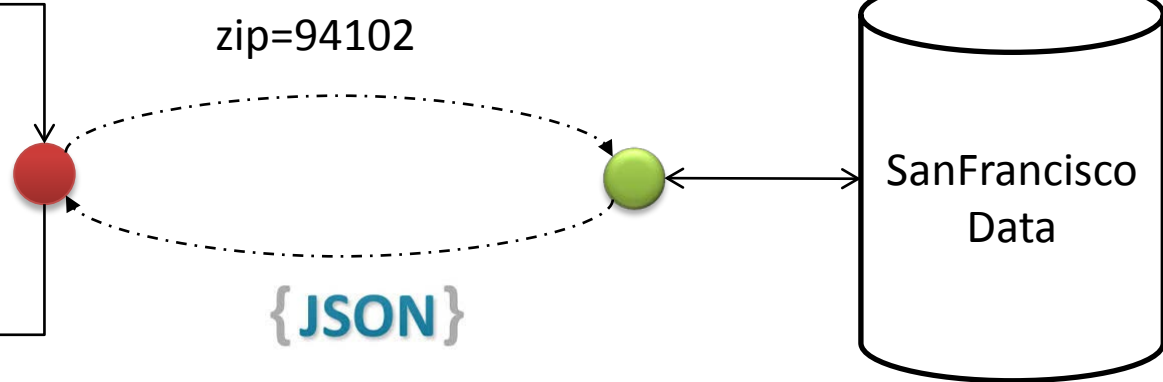
```

/* Associazione dell' evento click su #zip
con la funzione handler selectSF
$("#zip").on("click", selectSF);

```



zip=94102



Lastname	Firstname	Street	Zip Code	City	Country	Type
Armbruster	Helen	New Leigh Road 11	62704	Lakeland Grove 217	USA	Business
Azberg	Julian	Herbertstrasse 5	5411	Salzburg	Austria	Business
Hauptmann	Werner	Hauptstrasse 24	60300	Frankfurt	Germany	Business
Sanjona	Armand	Spinalo Creek 123	60M 100	Solover, Ontario	Canada	Private
Kurtz	Ingeborg	Ledergasse 6	1034	Vienna	Austria	Private
Ludwig	Gustav	Hauptstr 5	29100	Bremen	Germany	Private
Ludwig	Hildegard	Altestrasse 48	60316	Frankfurt	Germany	Business
Helmreich	Ina	Richterweg 15	60309	Frankfurt	Germany	Private
Melinda	Dija	Grünstrasse 42	1012	Vienna	Austria	Private
Mazart	Martina	Haydnweg 4	5081	Salzburg	Austria	Business

```

function selectSF(){
$.getJSON(
  "mysql/selectSF.php",
  {zip: $("#zip input:checked").val()},
  function( resp ) { manageResults(resp); }
);
}

```



```

<?PHP
// SelectSF.php
include("dbLibrary.php");
$zip = $_GET['zip'];

$db = openDB("localhost", "root", $password, "lpw");
$sql = "SELECT * FROM SanFrancisco WHERE zip_code='$zip'";
$records = select($db,$sql);
closeDB($db);

echo(json_encode($records));
?>

```



Flusso del programma

Agent	Action	Code
User	EVENT: user clicks on zip code 94103	
Handler JS	Starts	<code>\$("#zip").on("click", selectSF);</code>
Handler JS	Gets the zip code selected value	<code>\$("#zip input:checked").val()</code>
Handler JS	Call the php API	<code>\$getJSON("selectSF.php",parameter, function(output){})</code>
API php	Gets the zip code	<code>\$zip = \$_GET['zip'];</code>
API php	Makes a query	<code>SELECT * FROM SanFrancisco WHERE zip_code='\$zip'</code>
API php	Returns JSON data	<code>echo(json_encode(\$records));</code>
Handler JS	Display JSON data	

Programmazione guidata da eventi event-driven programming

- Definizione (wikipedia): **paradigma di programmazione** dove il **flusso del programma** è definito da eventi quali:
 - interazioni di utenti (mouse click, key press, mouse over)
 - interrupt di dispositivi (ex sensori)
 - messaggi da altri programmi
- Un programma event-driven generalmente rimane in attesa di un set di eventi, non appena uno di questi si verifica viene lanciato (**trigger**) un pezzo di codice (**callback function**)

Libreria JQuery

<https://jquery.com/download/>



- Navigazione del DOM – CSS Selector
 - `$("#zip input:checked").val()`
- Gestione degli eventi
 - `$("#zip").on("click" , selectSF) ;`
- Chiamate AJAX
 - `$getJSON("selectSF.php" , parameter , function(output) { })`
- Gestione array
 - `$.each(data , function(index , element) { }) ;`

Provare ad aggiungere un filtro sul nome della struttura

```
SELECT *  
FROM `sanfrancisco`  
WHERE zip_code=' $zip' " AND  
`DBA_Name` LIKE '$name%'
```