



Android Class

#Android Notes

Volley Library



What is Library ?

- Someone's Code.
- Which help us to build rapid app Development.



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Why to Use Library ?

- Fast Development
- Stable Development
- Error Checking



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Async Task

- <https://developer.android.com/reference/android/os/AsyncTask>
- Which help to Fetch JSON API Data.
- Limitation :
- It takes time to Fetch Data from JSON
- Application will terminate if Data is not present.



JSON API ?

- Do you Know JSON API ?
- Yes
- Goto Learn JSON API /



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List of Android Library

- Volly
- Retrofit
- Glide



What is Volley?

- **Volley** is a HTTP library developed by Google and was first introduced during Google I/O 2013.
- This library is used to transmit data over the network. It actually makes networking faster and easier for Apps.



Cont...

- The volley library has the features like automatic scheduling of network request, multiple concurrent connections, request prioritization, cancel/block a request, easier management of UI with data fetched asynchronously from the network and also offers easier customization.



Advantages of using Volley:

- All the task that need to be done with Networking in Android, can be done with the help of Volley.
- Automatic scheduling of network requests.
- Catching
- Multiple concurrent network connections.
- Cancelling request API.
- Request prioritization.
- Volley provides debugging and tracing tools.



How to get started?

- **Create new project.**
- **Open build.gradle(Module: app) and add the following dependency:**
dependencies

```
{  
    //...  
    implementation 'com.android.volley:volley:1.1.0'  
}
```



Cont...

- In **AndroidManifest.xml** add the internet permission:

```
<uses-permission  
    android:name="android.permission.INTERNET />"
```



Classes in Volley Library:

- Volley has two main classes:

1. **Request Queue:**
2. **Request:**



Cont...

- **Request Queue:**
- Volley is a networking library managed by the RequestQueue and mainly used for smaller Networking purposes in Android.

RequestQueue queue = Volley.newRequestQueue(this);

- **Request:**
- It contains all the necessary details for making web API call. For example: which method to Use (GET or POST), request data to pass, response listener, error listener.



String Request

- This type of request is used to retrieve data from a server as a String.
- The structure of the StringRequest contains a request method (POST or GET), a URL to the String source, a Response.Listener and a Response.ErrorListener.



Request Constructors used in Volley takes 4 parameter:

```
String url = "https:// string_url/";
StringRequest
    stringRequest
    = new StringRequest(
        Request.Method.GET,
        url,
        new Response.Listener() {
            @Override
            public void onResponse(String response)
            {
            }
        },
        new Response.ErrorListener() {
            @Override
            public void onErrorResponse(VolleyError error)
            {
            }
        });
requestQueue.add(stringRequest);
```



Request Constructors used in Volley takes 4 parameter:

```
String url = "https:// string_url/";  
StringRequest stringRequest = new StringRequest( Request.Method.GET,  
url, new Response.Listener() {  
    @Override  
    public void onResponse(String response)  
    {  
    }  
}, new Response.ErrorListener() {
```



Cont...

```
@Override  
public void onErrorResponse(VolleyError error)  
{  
}  
});  
  
requestQueue.add(stringRequest);
```



Cont...

- **First Parameter: Request.Method.GET** – The GET is used to read. You can also use POST (to create), PUT (To update/replace), DELETE (to delete), PATCH (to update/modify) and more.
- **Second Parameter: URL** – The url that will response to the HTTP request.
- **Third Parameter: Successful Response Listener** – Where your data will go after the request is successfully complete.



Cont...

- **Fourth Parameter: Error Listener –** What will be told if there was a problem with your request. For example, you can display it in Log to see the error.
- Now the last step is to add your request to Request queue and rest volley will handle for you.



More Details

- <https://developer.android.com/training/volley>





USE XML

USE JSON

Using JSON



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JSON



What is JSON?

- JSON stands for JavaScript Object Notation.
- JSON is a lightweight data-interchange format.
- JSON is "self-describing" and easy to understand.
- JSON is language independent .



Example

```
{  
  "book": [  
    {  
      "id": "01",  
      "language": "Java",  
      "edition": "third",  
      "author": "Herbert Schildt"  
    },  
    {  
      "id": "02",  
      "language": "C++",  
      "edition": "second"  
      "author": "E.Balagurusamy"  
    }]  
}
```





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How to Create JSON API ?

- Programming Language
 - PHP & Mysql , NodeJS,Django,ASP,Laravel
- Testing Tool
 - PostMan



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Fake JSON API

- <https://jsonplaceholder.typicode.com/>



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API FIRST!

MAKE BACKEND GREAT AGAIN!

makeameme.org



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Create JSON API





Recent Favorites

Server: 127.0.0.1 » Database: db_aptutorials » Table: tbl_student

Browse Structure SQL Search Insert Export Import Privileges M

Table structure Relation view

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	st_id	int(11)			No	None		AUTO_INCREMENT	Change Delete
2	st_name	varchar(20)	latin1_swedish_ci		No	None			Change Delete
3	st_email	varchar(50)	latin1_swedish_ci		No	None			Change Delete
4	st_mobileno	varchar(100)	latin1_swedish_ci		No	None			Change Delete

Check all With selected: [Browse](#) [Change](#) [Drop](#) [Primary](#) [Unique](#) [Index](#)

[Fulltext](#) [Add to central columns](#) [Remove from central columns](#)

[Print](#) [Propose table structure](#) [Track table](#) [Move columns](#) [Normalize](#)

[Add](#) column(s) after st_mobileno [Go](#)

[Indexes](#)

Action	Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
--------	---------	------	--------	--------	--------	-------------	-----------	------	---------



Add Record



C: > xampp > htdocs > akashpadhiyar > php api-add.php

```
1 <?php
2 $connection = mysqli_connect("localhost", "root", "", "db_aptutorials") or die(mysqli_connect_error());
3 $response = array();
4 if (isset($_POST['st_name']) && isset($_POST['st_email']) && isset($_POST['st_mobileno'])) {
5
6     $st_name = mysqli_real_escape_string($connection,$_POST['st_name']);
7     $st_email = mysqli_real_escape_string($connection,$_POST['st_email']);
8     $st_mobileno = mysqli_real_escape_string($connection,$_POST['st_mobileno']);
9
10    $query = mysqli_query($connection,"insert into tbl_student(`st_name`, `st_email`, `st_mobileno`)
11                           values('{$st_name}', '{$st_email}', '{$st_mobileno}')") or die(mysqli_error($connection));
12    if ($query) {
13        $response['flag'] = '1';
14        $response["message"] = "Record Inserted ";
15    } else {
16        $response['flag'] = '0';
17        $response["message"] = "Error in Query";
18    }
19 } else {
20     $response['flag'] = '0';
21     $response["message"] = "Parameter Missing";
22 }
23 echo json_encode($response);
24 ?>
```

Microsoft Windows [Version 10.0.18363.836]
(c) 2019 Microsoft Corporation. All rights reserved.

c:\Users\Akash>ipconfig

windows IP Configuration

Ethernet adapter Ethernet:

Connection-specific DNS Suffix	:	
Link-local IPv6 Address	:	fe80::e848:679d:6500:82ac%18
IPv4 Address	:	192.168.0.102
Subnet Mask	:	255.255.255.0
Default Gateway	:	192.168.0.1

c:\Users\Akash>



```
1 // 20200527081736
2 // http://192.168.0.102/akashpadhiyar/api-add.php
3
4 {
5     "flag": "0",
6     "message": "Parameter Missing"
7 }
```



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My Workspace

[Invite](#)

Sign In

Filter

History

Collections

APIs

[+ New API](#)

Sign in to create APIs

APIs define related collections and environments under a consistent schema.

[Sign in to create APIs](#)

POST http://192.168.0.102/akashpa... ●

GET Untitled Request



No Environment

Comments 0



Untitled Request

GET

Enter request URL

Send

Save

Cookies

Code

Params

Authorization

Headers (7)

Body

Pre-request Script

Tests

Settings

Query Params

KEY	VALUE	DESCRIPTION	...	Bulk Edit
Key	Value	Description		

Response



Hit Send to get a response



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APIs

POST http://192.168.0.102/akashpa...

GET Untitled Request

+

...

No Environment



Untitled Request

Comments 0



POST

http://192.168.0.102/akashpadhiyar/api-add.php

Send

Save

Sign in to create APIs

APIs define related collections and environments under a consistent schema.

Sign in to create APIs

Params	Authorization	Headers (9)	Body	Pre-request Script	Tests	Settings	Cookies	Code
<input type="radio"/> none	<input checked="" type="radio"/> form-data	<input type="radio"/> x-www-form-urlencoded	<input type="radio"/> raw	<input type="radio"/> binary	<input type="radio"/> GraphQL			
<input checked="" type="checkbox"/> st_name			Akash P					
<input checked="" type="checkbox"/> st_email			akashsir.com@gmail.com					
<input checked="" type="checkbox"/> st_mobileno			9978621654					
Key			Value			Description		

Response



Hit Send to get a response

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+ New API

Sign in to create APIs

APIs define related collections and environments under a consistent schema.

Sign in to create APIs

POST http://192.168.0.102/akashpa...

GET Untitled Request

+

...

No Environment



Comments 0

Untitled Request

Send

Save

POST

http://192.168.0.102/akashpadhiyar/api-add.php

Params

Authorization

Headers (9)

Body

Pre-request Script

Tests

Settings

Cookies

Code

none

form-data

x-www-form-urlencoded

raw

binary

GraphQL

	KEY	VALUE	DESCRIPTION	...	Bulk Edit
<input checked="" type="checkbox"/>	st_name	Akash P			
<input checked="" type="checkbox"/>	st_email	akashsir.com@gmail.com			
<input checked="" type="checkbox"/>	st_mobileno	9978621654			
	Key	Value	Description		

Body Cookies Headers (7) Test Results

Status: 200 OK Time: 26 ms Size: 296 B Save Response

Pretty Raw Preview Visualize JSON



```
1 {  
2   "flag": "1",  
3   "message": "Record Inserted "  
4 }
```

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Recent

Favorites

New

apwork_ataccv1

bugtracker

db_aptutorials

New

tbl_student

information_schema

mysql

nodeapi

performance_schema

phpmyadmin

project

sam

school_management

test

Browse

Structure

SQL

Search

Insert

Export

Import

Privileges

More

Showing rows 0 - 1 (2 total, Query took 0.0007 seconds.)

SELECT * FROM `tbl_student`

 Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh] Show all

Number of rows:

25

Filter rows:

Search this table

Sort by key:

None

+ Options

	st_id	st_name	st_email	st_mobileno
<input type="checkbox"/>	Edit Copy Delete	1	Akash Technolabs	info@akashtecholabs.com
<input type="checkbox"/>	Edit Copy Delete	2	Akash P	akashsir.com@gmail.com

 Check all

With selected:

 Show all

Number of rows:

25

Filter rows:

Search this table

Sort by key:

None

Query results operations

 Console

Fetch Record



C: > xampp > htdocs > akashpadhiyar > api-display.php

```
1  <?php
2  $connection = mysqli_connect("localhost", "root", "", "db_aptutorials") or die(mysqli_connect_error());
3  $response = array(); //Blank Array
4  $response["student"] = array(); // Array Key will be Student
5  $query = mysqli_query($connection, "SELECT * FROM `tbl_student`") or die(mysqli_error($connection));
6
7  $count = mysqli_num_rows($query);
8  // check for empty result
9  if ($count > 0) {
10     while ($row = mysqli_fetch_array($query)) {
11         $temparry = array();
12         $temparry["st_id"] = $row["st_id"];
13         $temparry["st_name"] = $row["st_name"];
14         $temparry["st_email"] = $row["st_email"];
15         $temparry["st_mobileno"] = $row["st_mobileno"];
16         //Array Append
17         array_push($response["student"], $temparry);
18     }
19     // success
20     $response["flag"] = 1;
21     $response["message"] = "$count Record Found";
22     // echoing JSON response
23 } else {
24     // success
25     $response["flag"] = 0;
26     $response["message"] = "No Record Found";
27     // echoing JSON response
28 }
29 echo json_encode($response);
```



```
1 // 20200527081457
2 // http://192.168.0.102/akashpadhiyar/api-display.php
3
4 {
5     "student": [
6         {
7             "st_id": "1",
8             "st_name": "Akash Technolabs",
9             "st_email": "info@akashtechnolabs.com",
10            "st_mobileno": "9978621654"
11        },
12        {
13            "st_id": "2",
14            "st_name": "Akash P",
15            "st_email": "akashsir.com@gmail.com",
16            "st_mobileno": "9978621654"
17        }
18    ],
19    "flag": 1,
20    "message": "2 Record Found"
21}
```



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No Environment



History

Collections

APIs

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Sign in to create APIs

APIs define related collections and environments under a consistent schema.

[Sign in to create APIs](#)

GET http://192.168.0.102/akashpadhiyar/api-display.php



No Environment

Com

[Send](#)

Co

Params

Authorization

Headers (7)

Body

Pre-request Script

Tests

Settings

 none form-data x-www-form-urlencoded raw binary GraphQL

This request does not have a body

Body

Cookies

Headers (7)

Test Results

Status: 200 OK Time: 22 ms Size: 510 B [Save R](#)

Pretty

Raw

Preview

Visualize

JSON



```
1  {
2      "student": [
3          {
4              "st_id": "1",
5              "st_name": "Akash Technolabs",
6              "st_email": "info@akashtechnolabs.com",
7              "st_mobileno": "9978621654"
8          },
9          {
10             "st_id": "2",
11             "st_name": "Akash P",
12             "st_email": "akashsir.com@gmail.com",
13             "st_mobileno": "9978621654"
14         }
15     ],
16     "flag": 1,
17     "message": "2 Record Found"
18 }
```

API MAKING

WHY U SO HARD?

memegenerator.net



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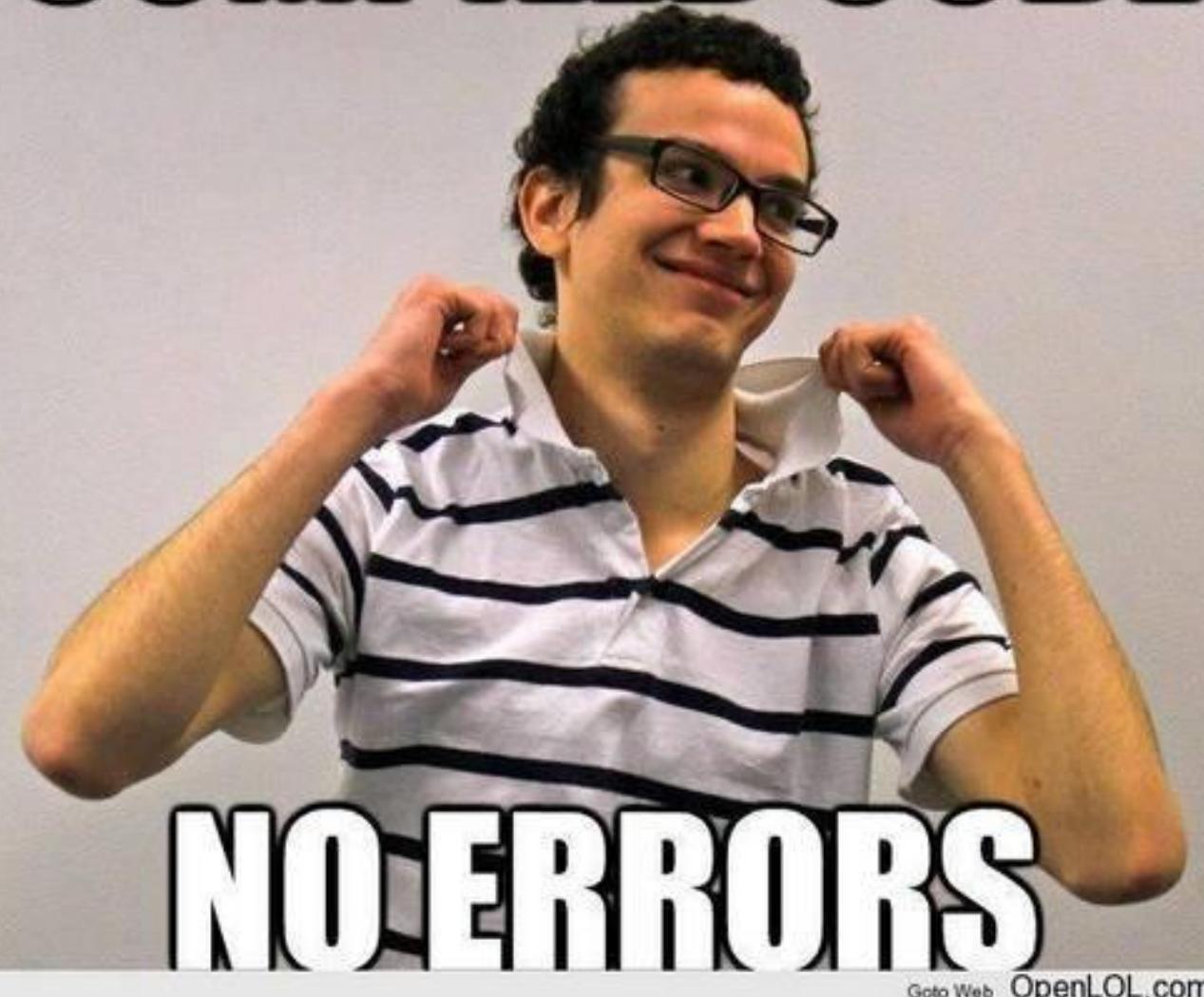


Do you want to Learn CRUD in PHP?

- PHP in 1 Hour Free Tutorials
 - What is PHP?
 - Variable,If,Loop
 - Get Post
 - DB Connection
 - CRUD
 - Theme Integration
- <https://www.youtube.com/watch?v=30LsuGfBD00>



COMPILED CODE



NO ERRORS

Goto Web OpenLOL.com

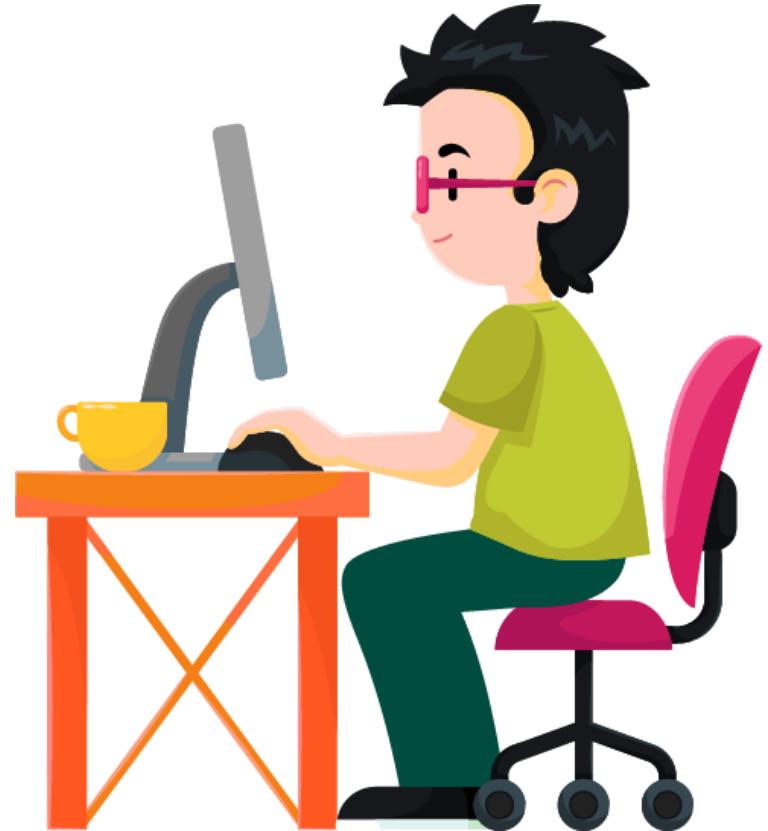


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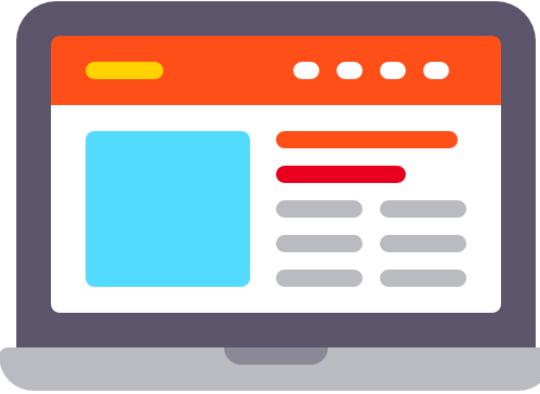
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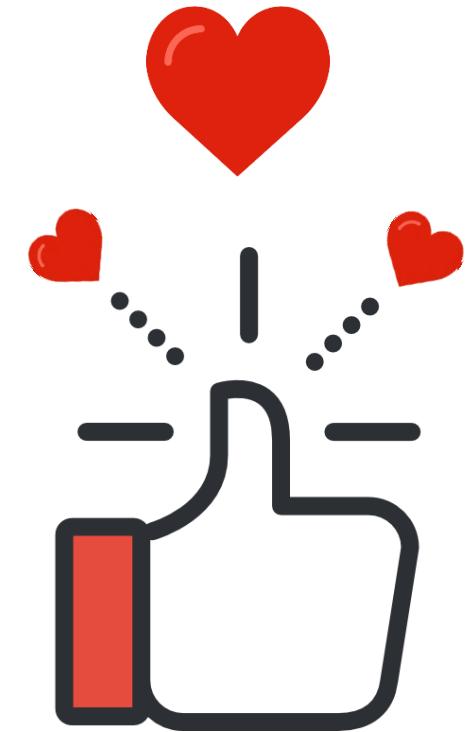
Just Dial

https://www.justdial.com/Ahmedabad/Akash-Technolabs-Navrangpura-Bus-Stop-Navrangpura/079PXX79-XX79-170615221520-S5C4_BZDET



Sulekha

<https://www.sulekha.com/akash-technolabs-navrangpura-ahmedabad-contact-address/ahmedabad>



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