



Android Class

#Android Notes



Volley Library



What is Library ?

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



Why to Use Library ?

- Fast Development
- Stable Development
- Error Checking



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/



List of Android Library

- Volley
- 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(Moule: 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



| 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"
    }
  ]
}
```





How to Create JSON API ?

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



Fake JSON API

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



API FIRST!

MAKE BACKEND GREAT AGAIN!

makeameme.org



Akash Technolabs

www.akashsir.com



Create JSON API





Recent Favorites

- New
- apwork_ataccv1
- bugtracker
- db_aptutorials
 - New
 - tbl_student
- information_schema
- mysql
- nodeapi
- performance_schema
- phpmyadmin
- project
- sam
- school_management
- test

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
<input type="checkbox"/>	1	st_id	int(11)			No	None		AUTO_INCREMENT	Change
<input type="checkbox"/>	2	st_name	varchar(20)	latin1_swedish_ci		No	None			Change
<input type="checkbox"/>	3	st_email	varchar(50)	latin1_swedish_ci		No	None			Change
<input type="checkbox"/>	4	st_mobilen0	varchar(100)	latin1_swedish_ci		No	None			Change



☐ 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

1

column(s)

after st_mobilen0



Go

Indexes

Action

Keyname

Type

Unique

Packed

Column

Cardinality

Collation

Null

Comment



Add Record



C: > xampp > htdocs > akashpadhiyar > 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_mobilenno'])) {
5
6     $st_name = mysqli_real_escape_string($connection, $_POST['st_name']);
7     $st_email = mysqli_real_escape_string($connection, $_POST['st_email']);
8     $st_mobilenno = mysqli_real_escape_string($connection, $_POST['st_mobilenno']);
9
10    $query = mysqli_query($connection, "insert into tbl_student(`st_name`, `st_email`, `st_mobilenno`)
11        values('{$st_name}', '{$st_email}', '{$st_mobilenno}')" ) or die(mysqli_error($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 }
```



New

Import

Runner



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



Untitled Request

Comments 0

GET



Enter request URL

Send



Save



Params

Authorization

Headers (7)

Body

Pre-request Script

Tests

Settings

Cookies

Code

Query Params

KEY	VALUE	DESCRIPTION		Bulk Edit
Key	Value	Description		

Response

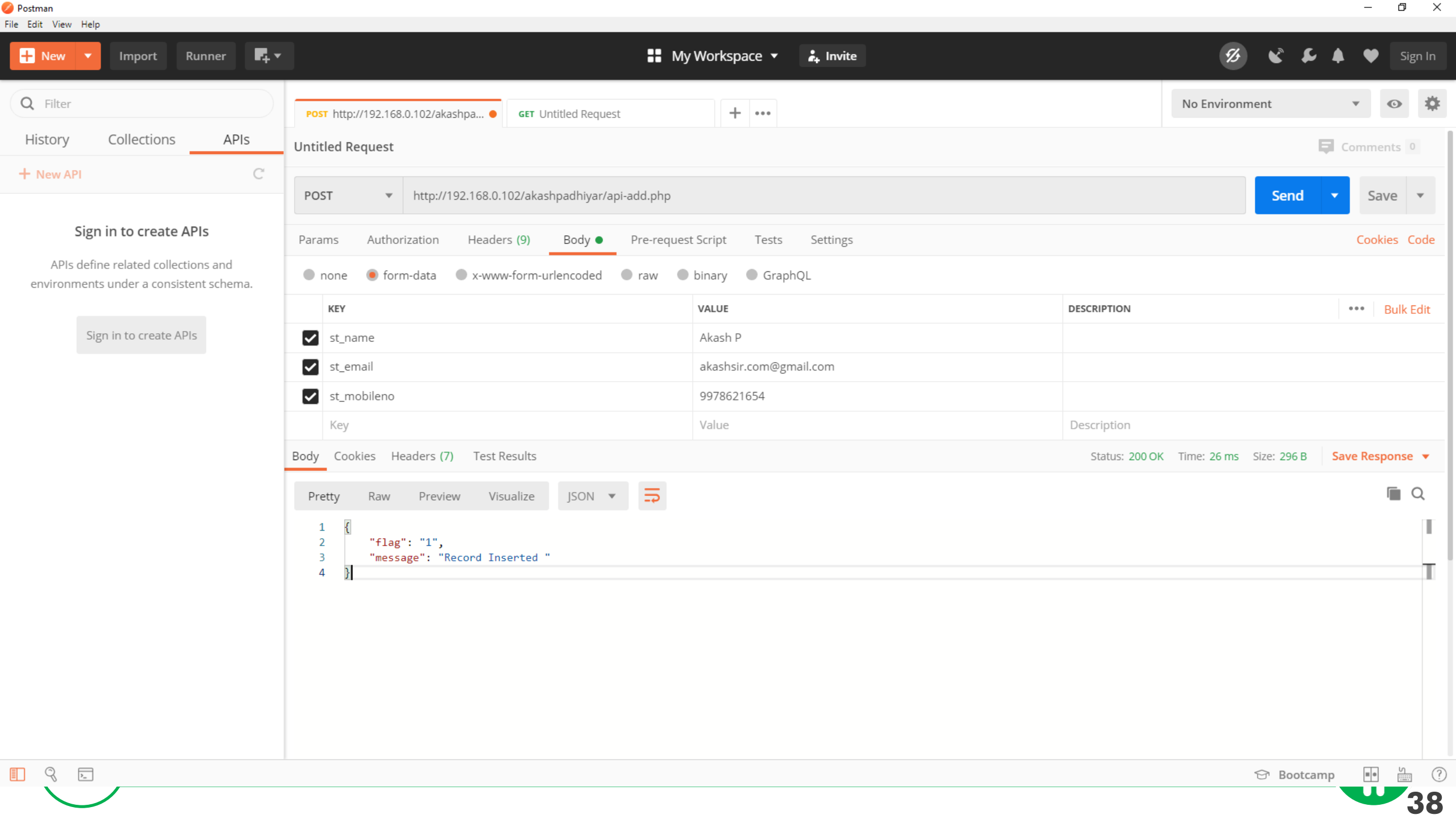


Hit Send to get a response



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

`SELECT * FROM `tbl_student``

☐ Profiling [\[Edit inline\]](#) [\[Edit\]](#) [\[Explain SQL\]](#) [\[Create PHP code\]](#) [\[Ref\]](#)

☐ Show all | Number of rows: 25 | Filter rows: Search this table | Sort by key: None

+ Options

			st_id	st_name	st_email	st_mobilen
<input type="checkbox"/>		Edit		Copy		Delete
1	Akash Technolabs	info@akashtechlabs.com	9978621654			
<input type="checkbox"/>		Edit		Copy		Delete
2	Akash P	akashsir.com@gmail.com	9978621654			

☐ Check all | With selected: [Edit](#) [Copy](#) [Delete](#) [Export](#)

☐ Show all | Number of rows: 25 | Filter rows: Search this table | Sort by key: None

Query results operations

[Print](#) [Copy to clipboard](#) [Export](#) [Display chart](#) [Create view](#)

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         $temparray = array();
12         $temparray["st_id"] = $row["st_id"];
13         $temparray["st_name"] = $row["st_name"];
14         $temparray["st_email"] = $row["st_email"];
15         $temparray["st_mobilen"] = $row["st_mobilen"];
16         //Array Append
17         array_push($response["student"], $temparray);
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);
```



```
192.168.0.102/akashpadhiyar/api x +
← → ↺ ⌂ ⓘ Not secure | 192.168.0.102/akashpadhiyar/api-display.php

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@akashtechlabs.com",
10      "st_mobilen": "9978621654"
11    },
12    {
13      "st_id": "2",
14      "st_name": "Akash P",
15      "st_email": "akashsir.com@gmail.com",
16      "st_mobilen": "9978621654"
17    }
18  ],
19  "flag": 1,
20  "message": "2 Record Found"
21 }
```



Postman

File Edit View Help

New

Import

Runner

My Workspace

Invite

Filter

HistoryCollectionsAPIs

New API

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/akashpad... + ...

No Environment

Untitled Request

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

ParamsAuthorizationHeaders (7)BodyPre-request ScriptTestsSettings

none

form-data

x-www-form-urlencoded

raw

binary

GraphQL

This request does not have a body

BodyCookiesHeaders (7)Test Results

Status: 200 OKTime: 22 msSize: 510 BSave R

PrettyRawPreviewVisualizeJSON

```
1 {
2   "student": [
3     {
4       "st_id": "1",
5       "st_name": "Akash Technolabs",
6       "st_email": "info@akashtechlabs.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 }
```

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API MAKING

WHY U SO HARD?

memegenerator.net



Do you want to Learn CRUD in PHP?

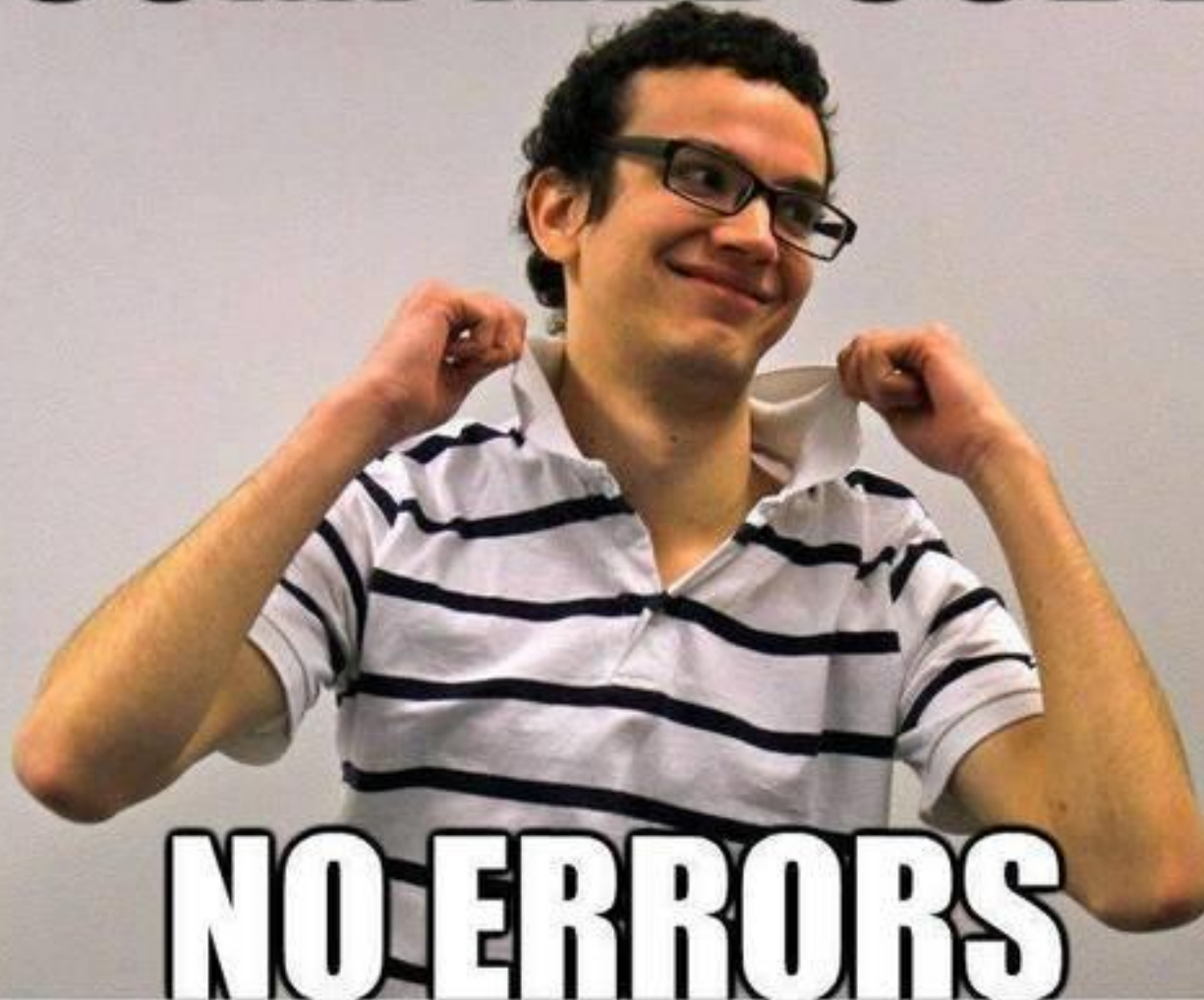
- PHP in 1 Hour Free Tutorials

- What is PHP?
- Variable, If, Loop
- Get Post
- DB Connection
- CRUD
- Theme Integration

- <https://www.youtube.com/watch?v=30LsuGfBDO0>



COMPILED CODE



NO ERRORS

Goto Web OpenLOL.com

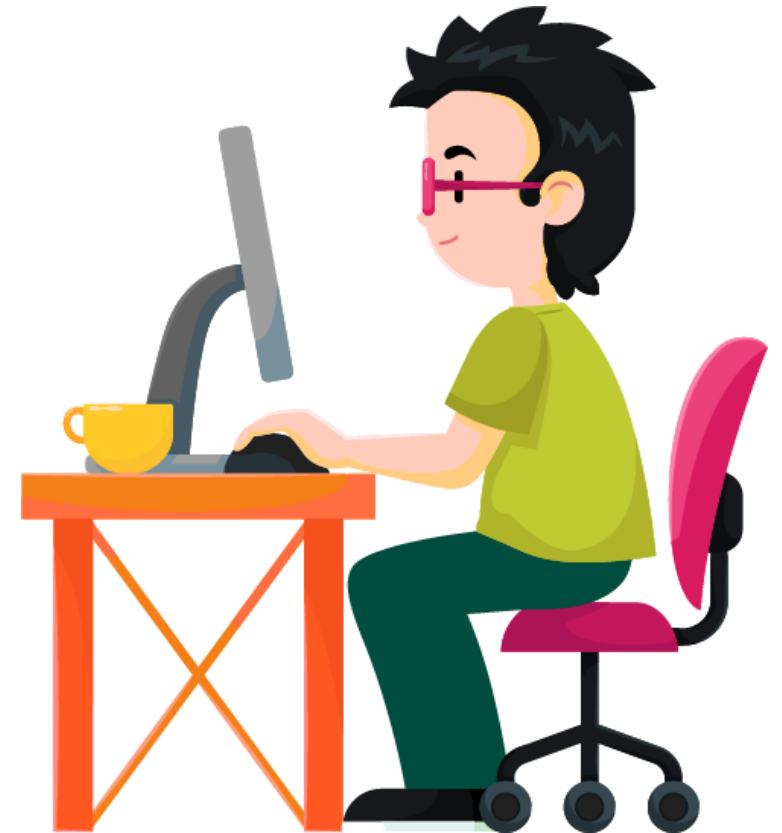


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<https://www.youtube.com/user/Akashtips>





Get More Details

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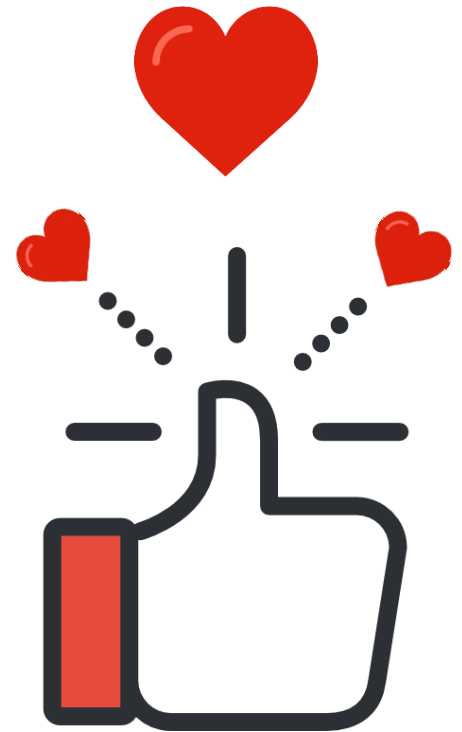
Just Dial

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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#AkashSir

www.akashsir.com

www.akashtechlabs.com

www.akashpadhiyar.com

www.aprtutorials.com

Social Info



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+91 99786-21654



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