



# Variable Usage in API

Prerequisite: Read the help document for [variables](#) to understand better.

## Pass data in chained API requests

Use variables to extract data from the previous response and feed it to another request in API Testing.



- **Source:** Location from where the values will be extracted. You can select the source as *Header*, *Status Code*, *XML Body*, or *JSON Body*.
- **Property:**
  - Header as the source: Specify the Header key as the property whose value will be assigned to the variable.
  - JSON Body and XML Body as the source: Specify the JSON or XML path to extract a value.
- **Variable:** Name of the variable

## Examples to extract data from JSON key-value response

```
1. {  
2.   "id":1,  
3.   "name":"Leanne Graham",  
4.   "username":"Bret",  
5.   "address":{  
6.     "city":"Gwenborough",
```

```
7.   "geo":{
8.     "lat":"-37.3159",
9.     "lng":"81.1496"
10.  }
11. },
12. "phoneNumbers":[
13.   {
14.     "type":"home",
15.     "number":"000-111-2222"
16.   },
17.   {
18.     "type":"mobile",
19.     "number":"111-222-3333"
20.   },
21.   {
22.     "type":"office",
23.     "number":"333-444-5555"
24.   }
25. ]
26. }
```

Property	Value
username	Bret
address.city	Gwenborough
phoneNumbers[0].number	000-111-2222
phoneNumbers[-1].number	333-444-5555
phoneNumber[*].number	000-111-2222 (or) 111-222-3333 (or) 333-444-5555

## Examples to extract data from JSON index-value response

```
1. [
2.   {
3.     "type":"home",
4.     "number":"000-111-2222"
```

```
5.     },
6.     {
7.         "type":"mobile",
8.         "number":"111-222-3333"
9.     },
10.    {
11.        "type":"office",
12.        "number":"333-444-5555"
13.    }
14. ]
```

Property	Value
[1].number	111-222-3333
[-1].type	office

## XPATH Expressions

The following is a sample for XPath expressions

```
1. <?xml version="1.0" encoding="UTF-8"?>
2. <root>
3.   <address>
4.     <city>Gwenborough</city>
5.     <geo>
6.       <lat>-37.3159</lat>
7.       <lng>81.1496</lng>
8.     </geo>
9.   </address>
10.  <id>1</id>
11.  <name>Leanne Graham</name>
12.  <phoneNumbers>
13.    <element>
14.      <number>000-111-2222</number>
15.      <type>home</type>
```

```
16.    </element>
17.    <element>
18.        <number>111-222-3333</number>
19.        <type>mobile</type>
20.    </element>
21.    <element>
22.        <number>333-444-5555</number>
23.        <type>office</type>
24.    </element>
25. </phoneNumbers>
26. <username>Bret</username>
27. </root>
```

Property	Value
/root/username/text()	Bret
/root/address/city/text()	Gwenborough
/root/phoneNumbers/element[1]/number/text()	000-111-2222
/root/phoneNumbers/element[3]/number/text()	333-444-5555
/root/phoneNumbers/element/number/text()	000-111-2222 (or) 111-222-3333 (or) 333-444-5555

## Example to store data from the first response and feed it to the second request as a query param

We will make two GET requests in this example. The first request will return a JSON response in which each element contains an "id" key with values starting from 1. We will extract "id" value of the second element (so the extracted value is 2), store it in a variable named var, and use the variable as a query param in the second request. Run API calls with the following data:

Request 1:

HTTP method: **GET**

URL: <https://jsonplaceholder.typicode.com/users/>

Request1  
GET https://jsonplaceholder.typicode.com/users/

Request    Assertions    Variables

GET    https://jsonplaceholder.typicode.com/users/

Params    Authentication    Headers    Body

Name	Value
Enter the Key	Enter the Value

+ Add Request    ⏸ Pause

Variables:

Source: **JSON Body**

Property: **[1].id**

Variable: **var**

Request1  
GET https://jsonplaceholder.typicode.com/users/

Request    Assertions    **Variables**

Source	Property	Variable
JSON Body	[1].id	var

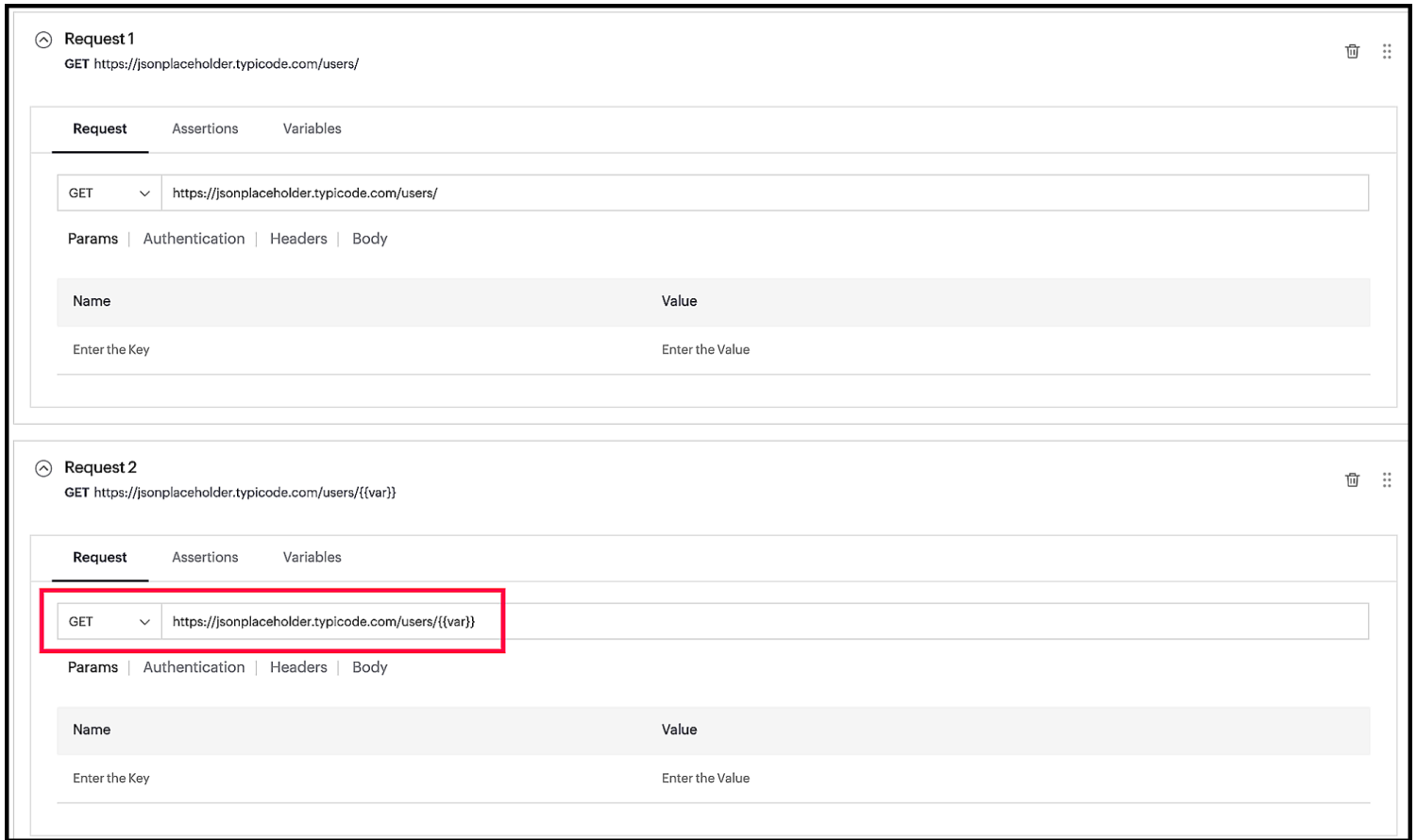
+ Add Variable

+ Add Request    ⏸ Pause

Request 2:

HTTP method: GET

URL: <https://jsonplaceholder.typicode.com/users/{{var}}>



The following is a truncated view of the first response. The highlighted value of 'id' is what is extracted and supplied as a query param in the second request URL.

• Preview Run

Execution Completed

Show Less

×

RUN SUMMARY

PREVIEW RUN

Results	Duration	Version	Assertions	Run On
Passed	767ms	V 1.0	0/0	Zoho Cloud

```
"phone": "1-770-736-8031 x56442",
"website": "hildegard.org",
"company": {
  "name": "Romaguera-Crona",
  "catchPhrase": "Multi-layered client-server neural-net",
  "bs": "harness real-time e-markets"
},
{
  "id": 2,
  "name": "Ervin Howell",
  "username": "Antonette",
  "email": "Shanna@melissa.tv",
  "address": {
```

Request 2

GET https://jsonplaceholder.typicode.com/users/2

200 | 64ms

Assertions

No Assertions present

The following is the response of the second request, and you can see the second element from the previous response being returned. You can also see the variable value (2) in the second request URL.

• Preview Run

Execution Completed

Show Less

×

RUN SUMMARY

PREVIEW RUN

Results	Duration	Version	Assertions	Run On
Passed	767ms	V 1.0	0/0	Zoho Cloud

Request 2

GET https://jsonplaceholder.typicode.com/user/2

200 | 64ms

Assertions

No Assertions present

Response Body

Response Headers

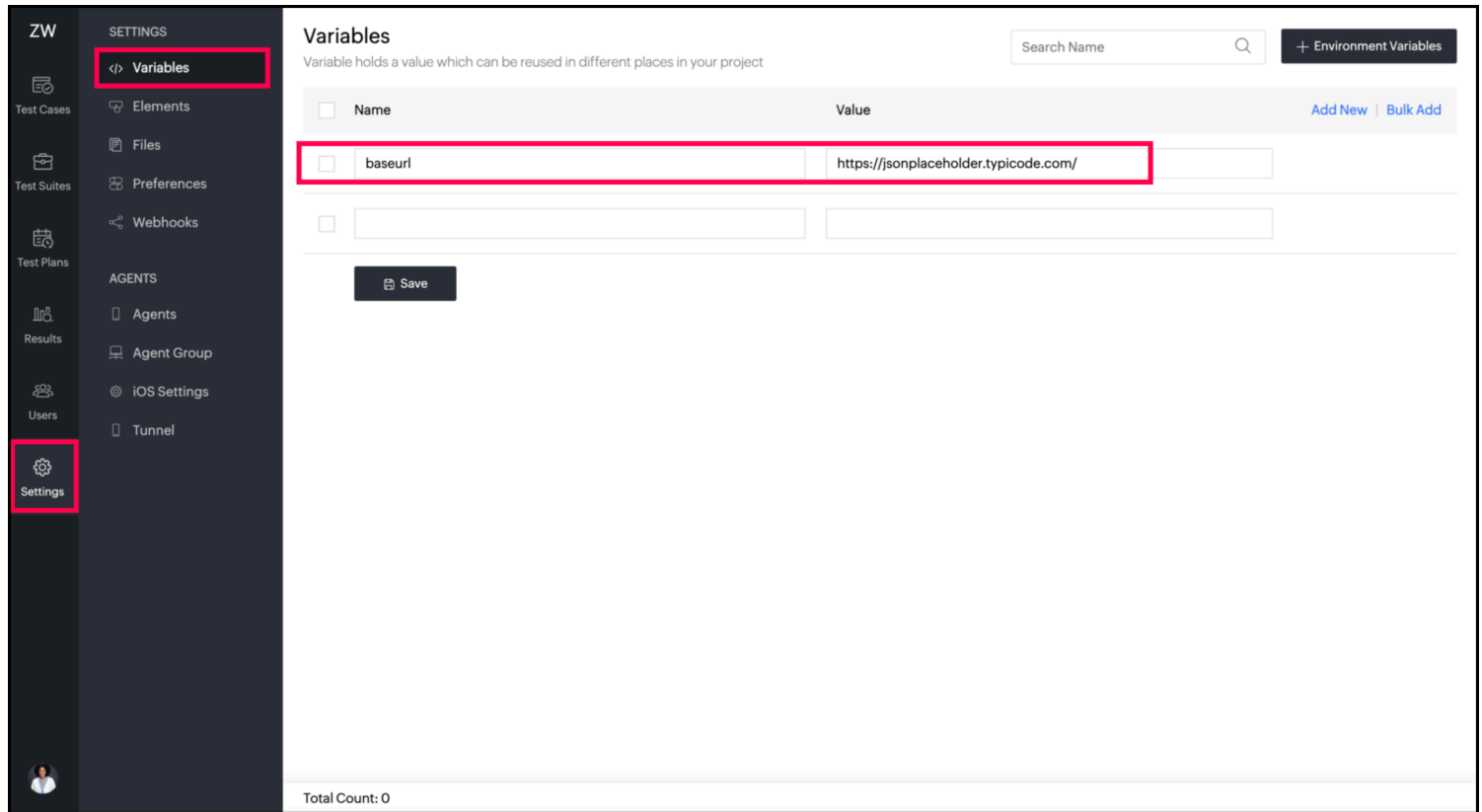
Request Details

raw

```
{
  "id": 2,
  "name": "Ervin Howell",
  "username": "Antonette",
  "email": "Shanna@melissa.tv",
  "address": {
    "street": "Victor Plains",
    "suite": "Suite 879",
    "city": "Wisokyburgh",
    "zipcode": "90566-7771",
    "geo": {
      "lat": "-43.9509",
```

# Example using a global variable as base URL of the request

In [Variables](#) section, create a variable named *baseurl* and assign the value <https://jsonplaceholder.typicode.com/> to it.



Supply the following values for the API request.

HTTP method: **GET**

URL: **{{ \$baseurl }}users/**



Run the test to view its response. You can also see the variable value inserted in the request URL.



• Preview Run

Execution Completed

Show Less

×

RUN SUMMARY

Results

Duration

Version

Assertions

Run On

Passed

407ms

V 1.0

0/0

Zoho Cloud

PREVIEW RUN

▶ Restart

⌕ Request 1

GET https://jsonplaceholder.typicode.com/users/

● 200

⌚ 171ms

Assertions

No Assertions present

Response Body

Response Headers

Request Details

raw

```
[
  {
    "id": 1,
    "name": "Leanne Graham",
    "username": "Bret",
    "email": "Sincere@april.biz",
    "address": {
      "street": "Kulas Light",
      "suite": "Apt. 556",
      "city": "Gwenborough",
      "zipcode": "92998-3874",
      "geo": {
```

# Related Links

- [Variables](#)