

Introduction to API Testing

Lesson 2 :Postman Basics

Lesson Objectives

To understand the following topics:

- Introduction to Postman
- Why Use Postman?
- Download and Install Postman
- How to use Postman
- Create new Request in Postman
- Get Request in Postman
- How to deal with Response in Postman
- POST Request using Postman
- Summary



Introduction to Postman

- POSTMAN is an API client used to develop, test, share and document APIs.
- It is used for backend testing where we enter the end-point URL, it sends the request to the server and receives the response back from the server.
- By using Postman, we do not have to build a framework (unlike Parasoft) to fetch the response from the service.
- It essentially helps in hitting API endpoints
- Popular tool among developers and automation engineers.

Why to use Postman

Postman has become a tool of choice for the following reasons:

- Accessibility
- Use of Collections
- Collaboration
- Creating Environments
- Creation of Tests
- Automation Testing
- Debugging
- Continuous Integration

Download and Install Postman

- Postman is available in 2 options.
 - As a Chrome app (this is already deprecated and has no support from the Postman developers)
 - Native App for different platforms like Windows, Mac OS, Linux, etc. It also handles the various authentication mechanism for the REST Requests

Download and Install Postman - Postman Native App

Being an Open Source tool, Postman can be easily downloaded.

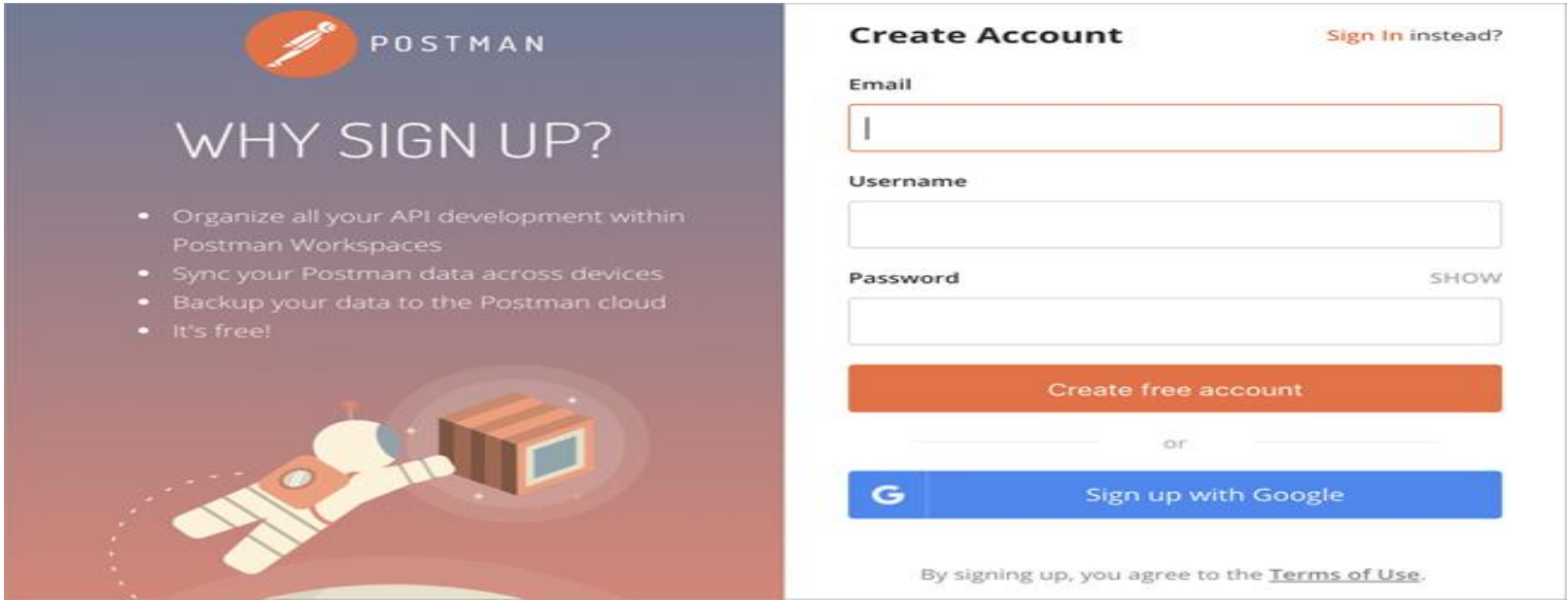
- Step1:Go to <https://www.postman.com/downloads/> and choose your desired platform among Mac, Windows or Linux. Click Download.



- Once the installation is successful, simply open the Postman Application to get started with.

Download and Install Postman - Postman Native App Continue...

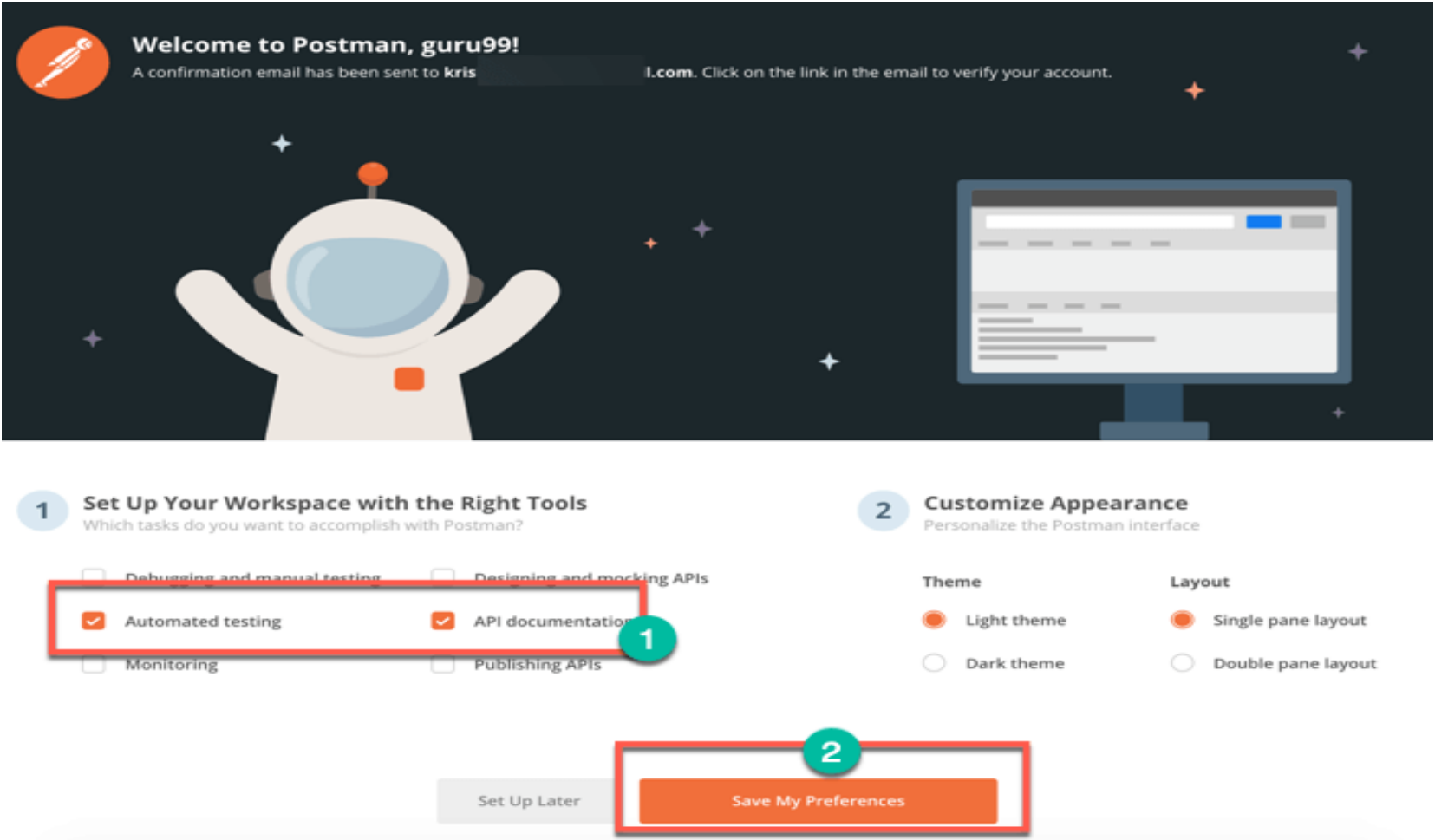
- It's highly recommended, to sign-in/sign-up into the Postman application using an existing email account.



- A signed-in account preserves all the Postman collections and requests.

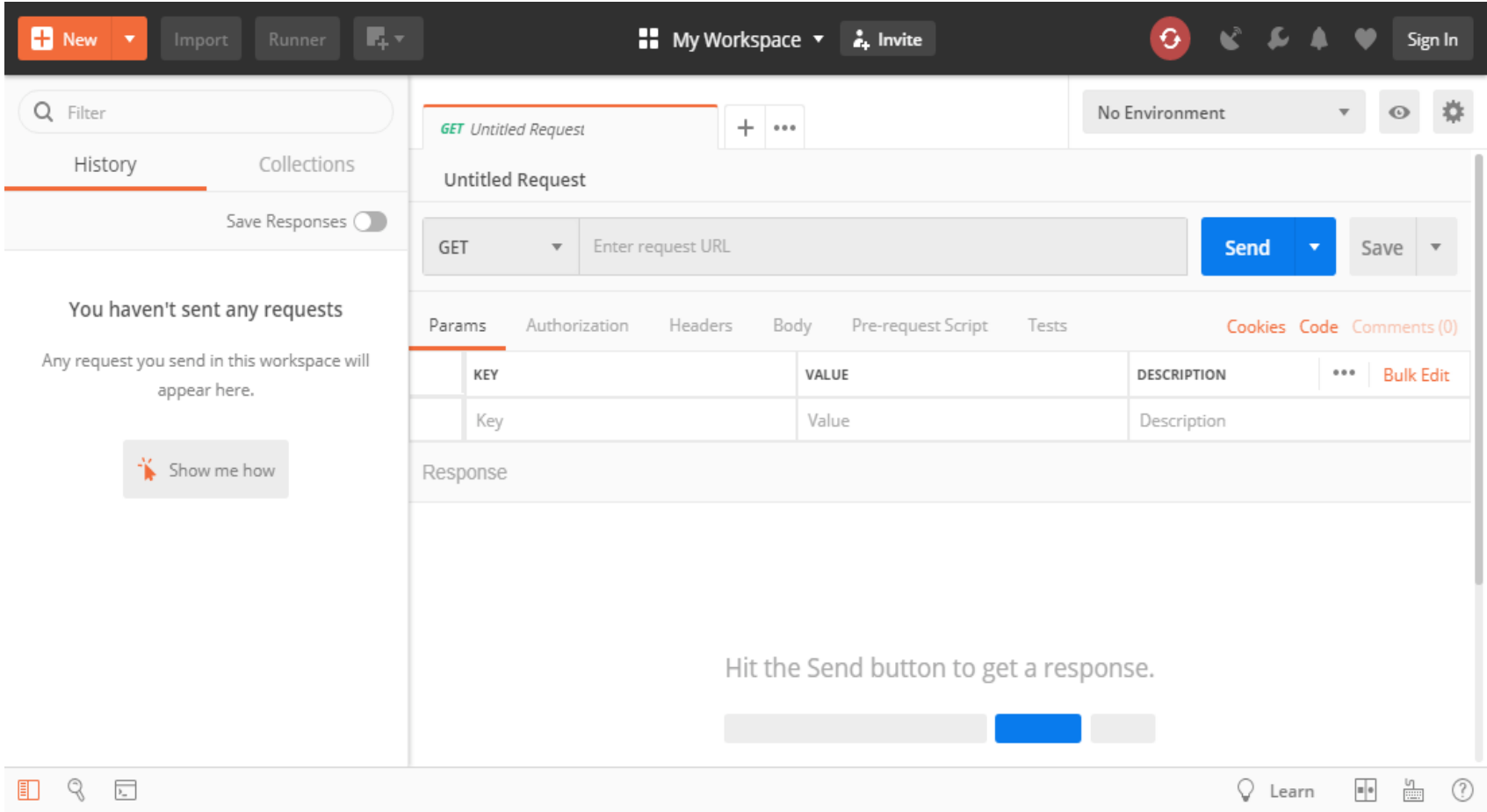
Download and Install Postman - Postman Native App Continue...

- Select the workspace tools you need and click Save My Preferences.



Download and Install Postman - Postman Native App Continue...

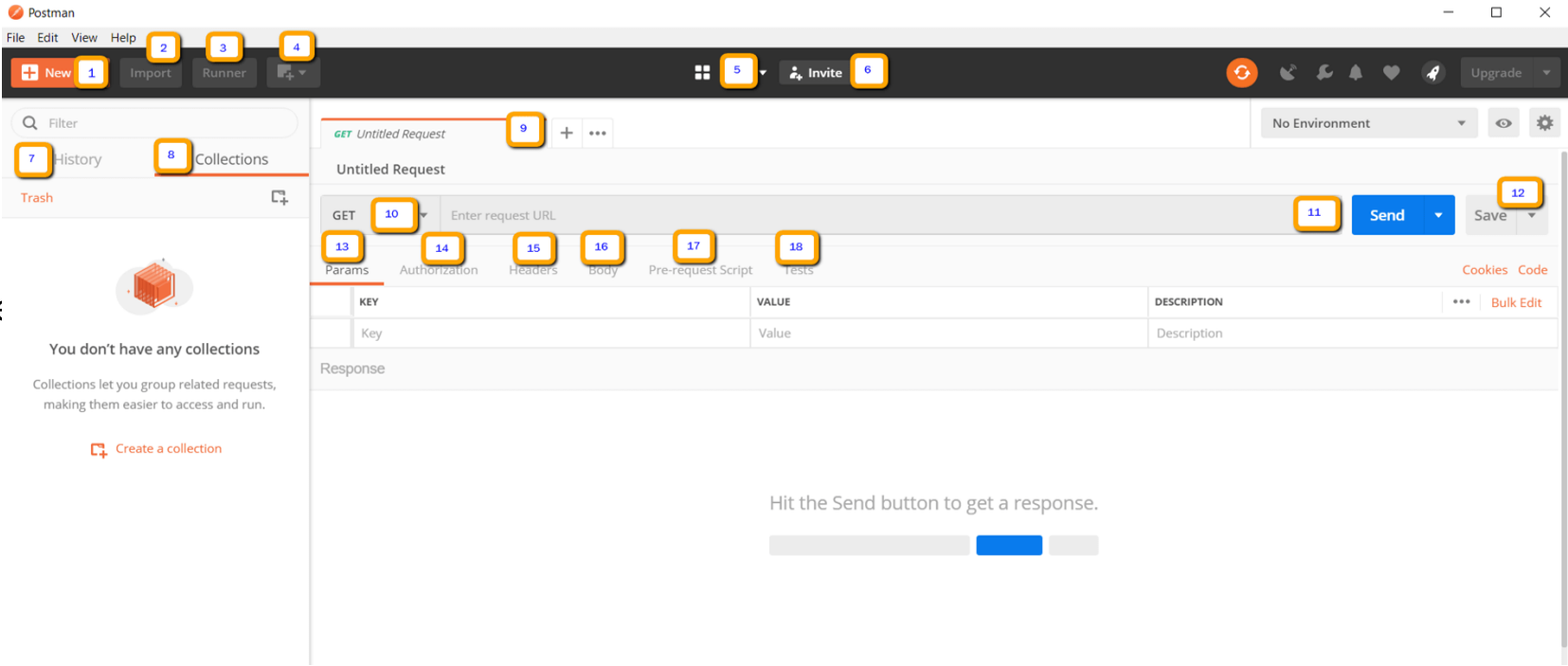
- You will see the Startup Screen



How to use Postman - Postman Workspace

Below is the Postman Workspace.

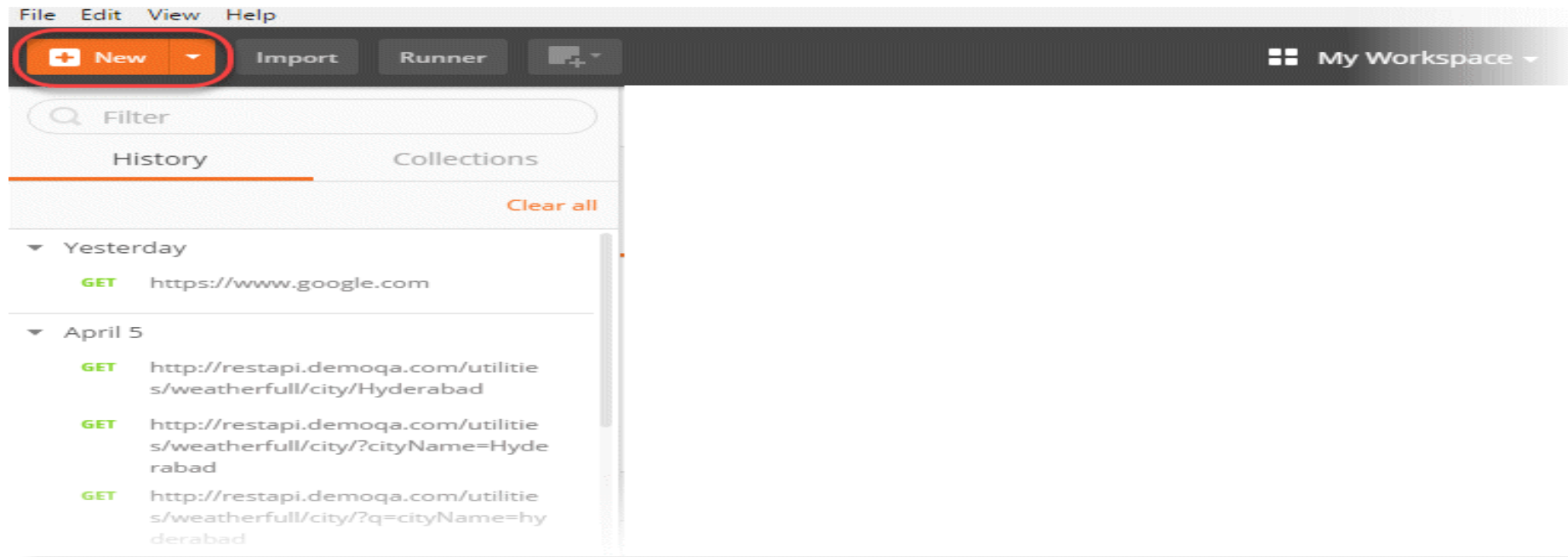
- 1. New
- 2. Import
- 3. Runner
- 4. Open New
- 5. My Workspace
- 6. Invite
- 7. History
- 8. Collections
- 9. Request tab
- 10. Tests



- 11. HTTP Request
- 12. Request URL
- 13. Save
- 14. Params
- 15. Authorization
- 16. Headers
- 17. Body
- 18. Pre-request Script

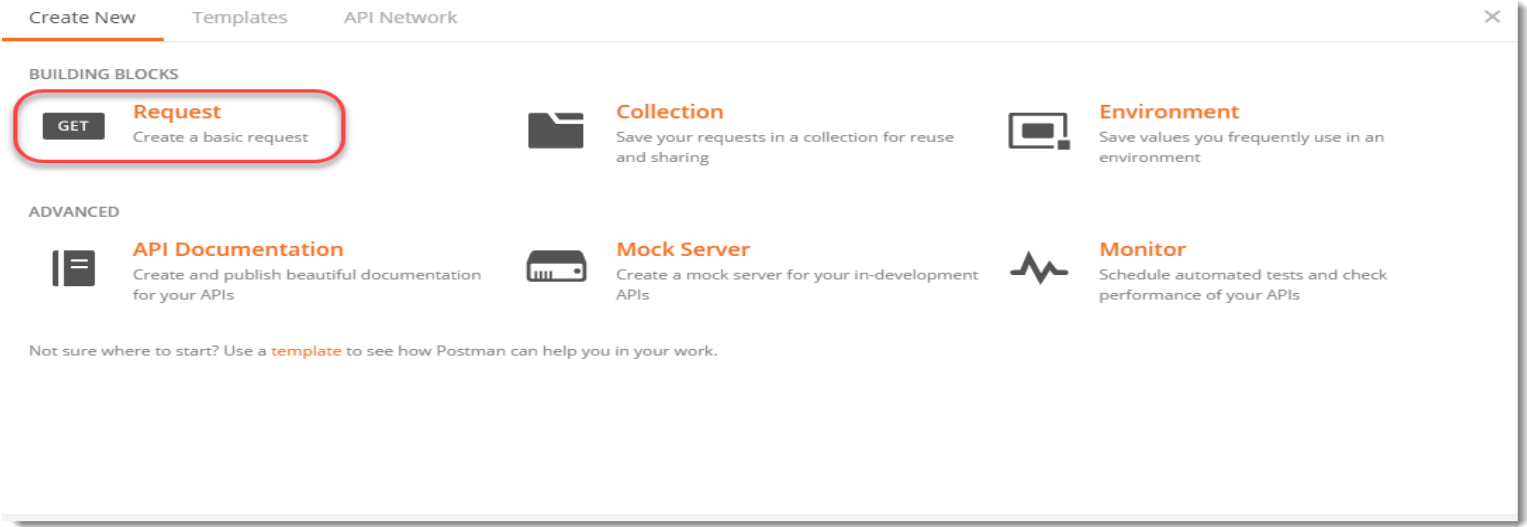
Create New Request in Postman

- Click on the NEW option in the header part.



Create New Request in Postman

- Click on Request.



Create New Request in Postman

- Enter a meaningful Request Name, Request Description which may include description about API (This field is optional.)

Requests in Postman are saved in collections (a group of requests).

[Learn more about creating collections](#)

Request name

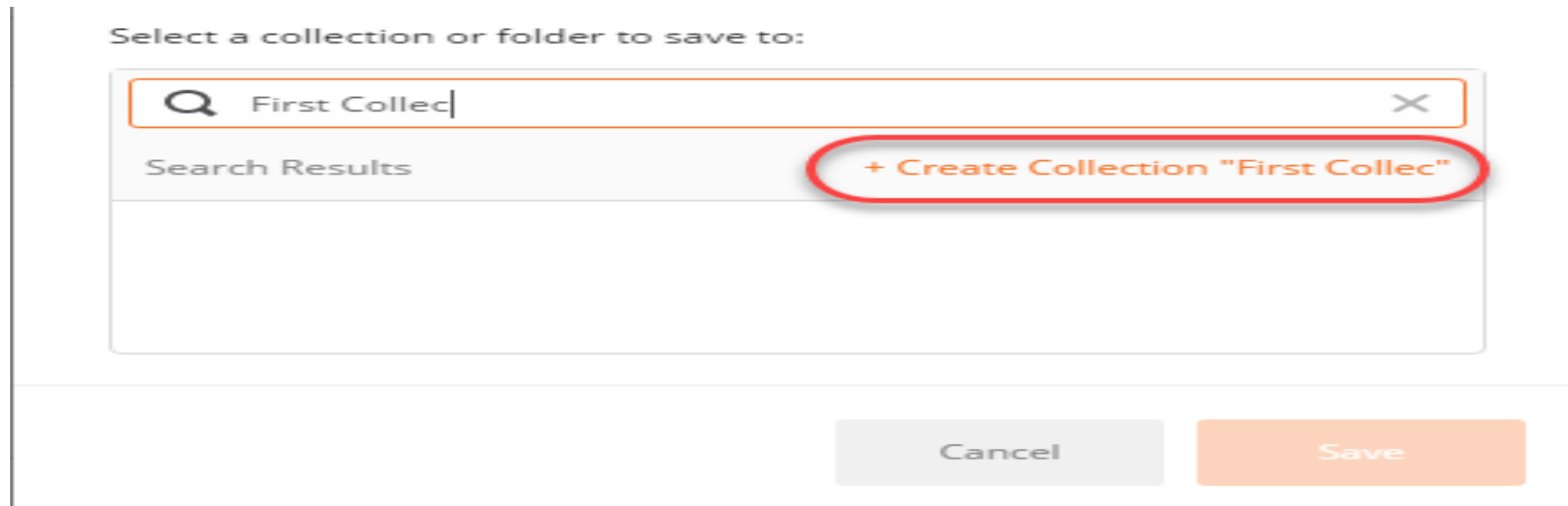
First Api

Request description (Optional)

Adding a description makes your docs better

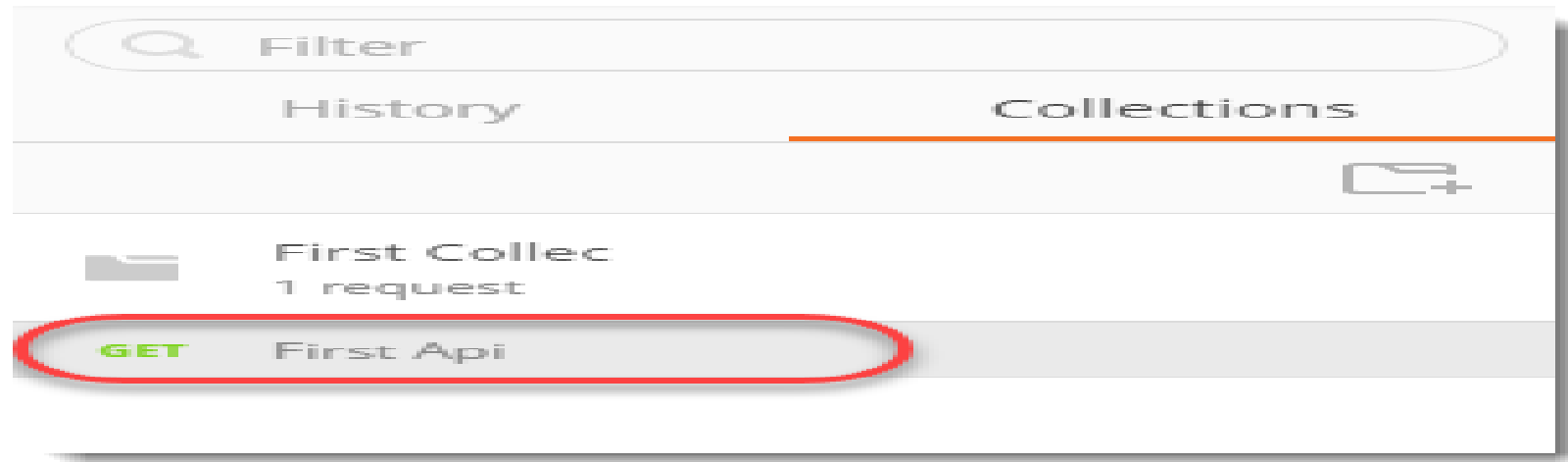
Create New Request in Postman

- Enter a meaningful Collection name in the bottom panel, like **First Collec.** we are using and select **+Create Collection** as shown. Press **Save**.



Create New Request in Postman

- Select *Collections* tab in sidebar, then you will notice all the collections folders, select *First Collec* and then select *First Api* under the First Collec tab.



Create New Request in Postman

- Enter ***www.google.com*** in the ***Address Bar*** and press ***Send***.



Create New Request in Postman

- Press **Save** if you wish to overwrite “First Api” or press the dropdown as shown and Save as a new request.
- The **Save As** option opens the same panel which opened through *New Request* at the start of this tutorial. It gives the option to enter the name and associate the request to some collection.

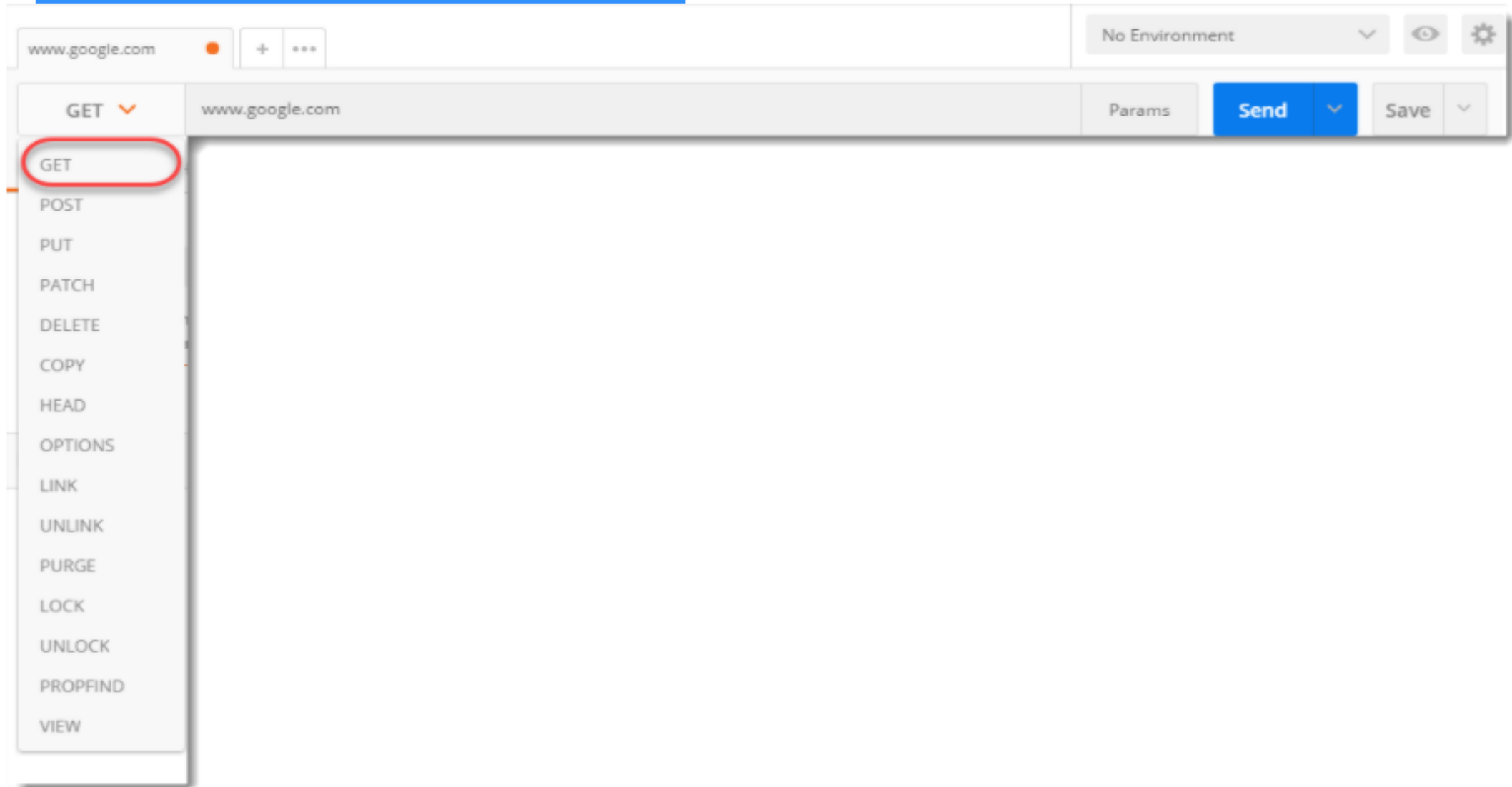


Get Request in Postman

- When we request from a client machine (User) to a server machine, we follow an architecture and HTTP Protocol.
- A *GET* request is used to get the information from the server and does not have any side-effects on the server.
- Not advisable to use Get Request while sending sensitive information.

Get Request in Postman....

- Step one: Select **GET** from the list of request types.



Get Request in Postman....

- Step 2: Enter **www.google.com** in the address bar as written in the above image and *Press Send*.



Get Request in Postman....

- The Body tab: Body means you have selected to view the response body which is been shown inside the box. In Body, you will see three options.
- **Pretty**
- **Raw**
- **Preview**

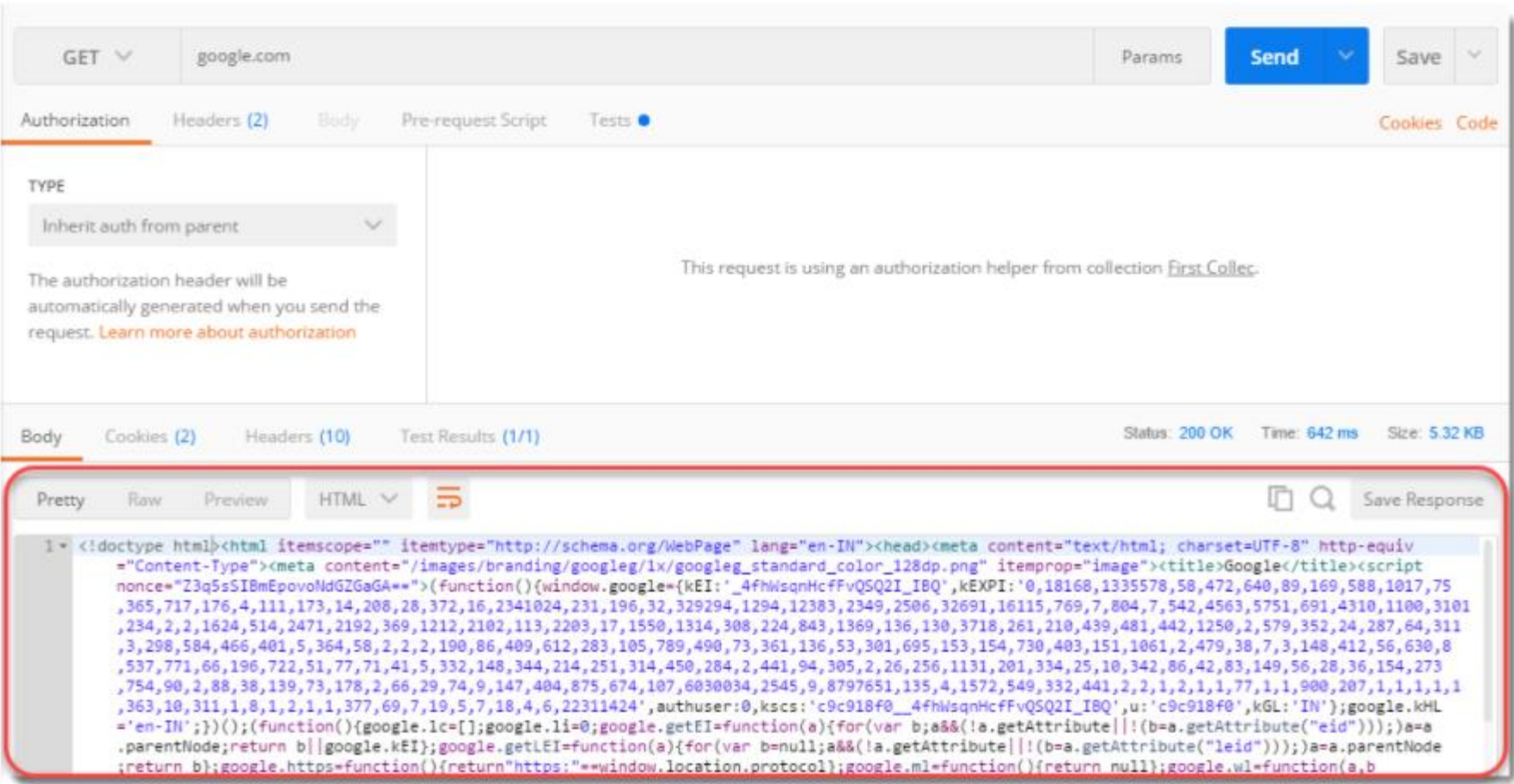


How to deal with Response in Postman

- A ***Response*** is a message that is received by the server in return to a ***Request*** that we send.
- Server action on receiving the Request.
- A response depends on the request mainly
- Postman has a beautiful interface for response and is very user-friendly.
- The Response user interface in Postman contains below mentioned major information blocks .
 - ***Response Status and Information***
 - ***Response Body***
 - ***Response Cookies***
 - ***Response Header***

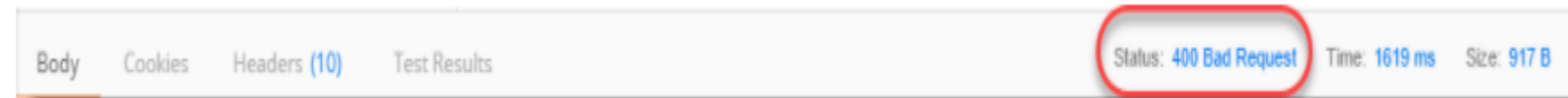
How to deal with Response in Postman..... Response Status and Information

- Send the Request **www.google.com** and we will get response as given below



Response Status and Information ... Status Code

- A ***status code*** tells you the status of the request.



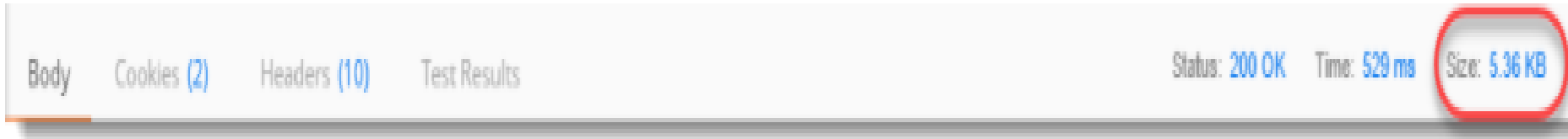
Response Status and Information ... Time

- **Time** is the duration which the response took after we sent the request and received the response.



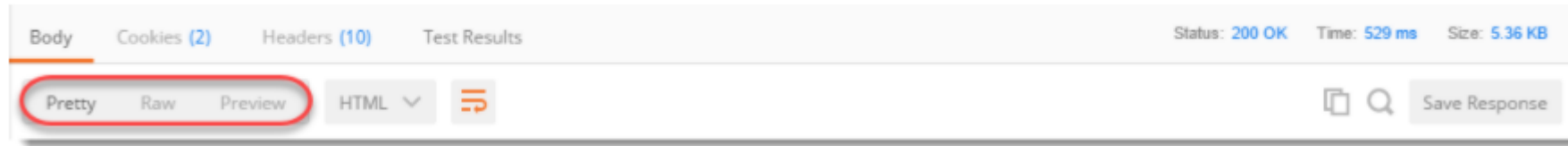
Response Status and Information Size

- **Size** is just the response size when it will be saved inside the memory.



Response Status and Information ... Response Body

- A **body** depicts the body of the response, which is the main response content, that has been sent from the server. In this case as you can see it is a web page code being sent to us as a response.



- The three options in Response body are
 - Pretty
 - Raw
 - Preview

Response Body ...Pretty

- Pretty is a prettier version of the content being sent. The content is prettier as it is more readable. It has coloured key words and different colours have different meanings. This makes a code more readable and look nicer. This formatting is done by the Postman itself after getting the code.



Response Body ...Raw

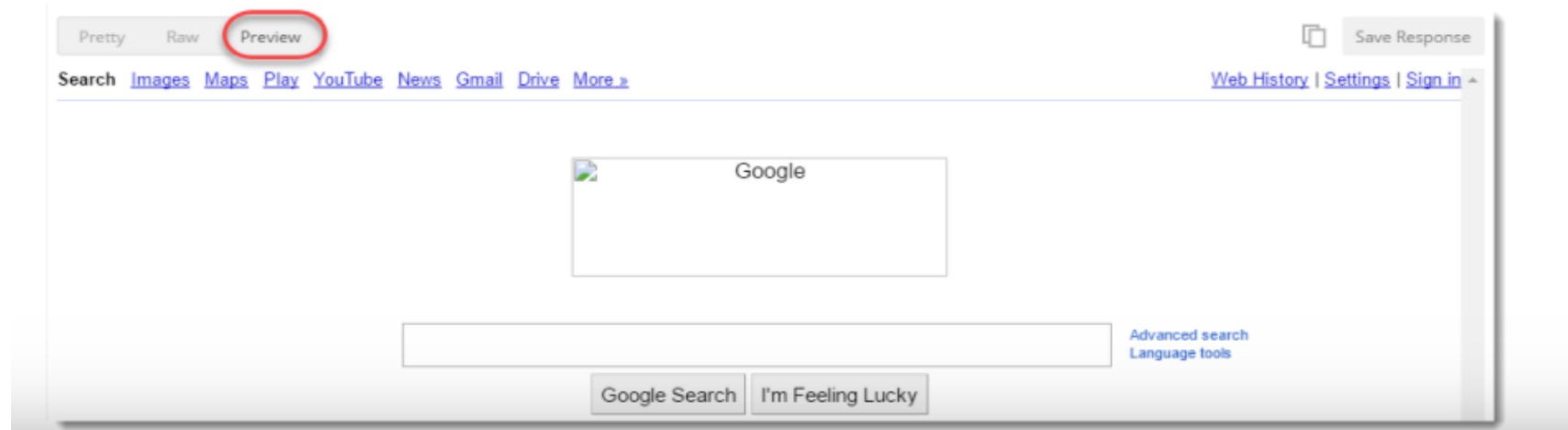
- Once you click on Preview you will get just the plain view of the content, as received from the server. It is just a raw version of the code without any colorful keywords. By looking at this code you might get why the other code is called *“Pretty”*.



Response Body ...Preview

- Preview of the code will show you the preview of the page, had the page been run inside a browser. Click on preview and you will see the exact page as you would have seen inside a browser.

Preview of the code will show you the preview of the page, had the page been run inside a browser. Click on preview and you will see the exact page as you would have seen inside a browser. So this would let you know the response preview without visiting the browser.



POST Request using Postman- What is a POST Request?

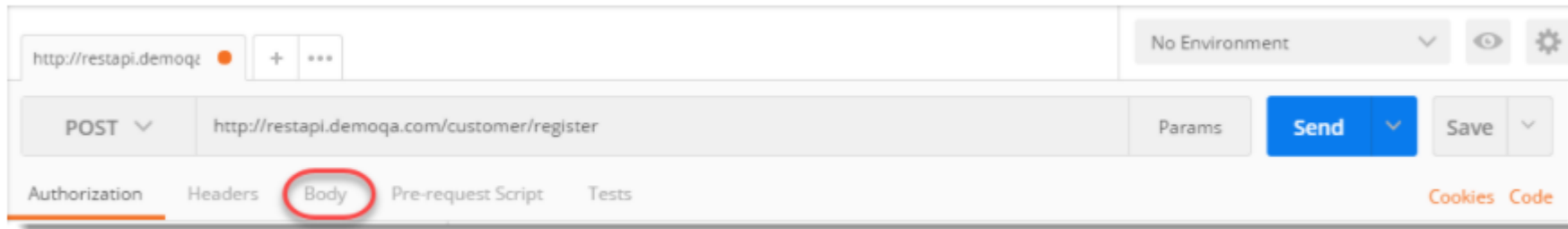
- A **POST** is an **HTTP Verb** similar to a **GET** request, this specifies that a client is posting data on the given **Endpoint**.
- A **POST** request is a method that is used when we need to send some additional information inside the body of the request to the server.
- When we send a POST request we generally intend to have some modification at the server such as ***updatation, deletion or addition***.
- **POST** requests are very popular and are mostly used whenever you are sending some sensitive information such as submitting a form or sending sensitive information to the server.

POST Request using Postman- Demo

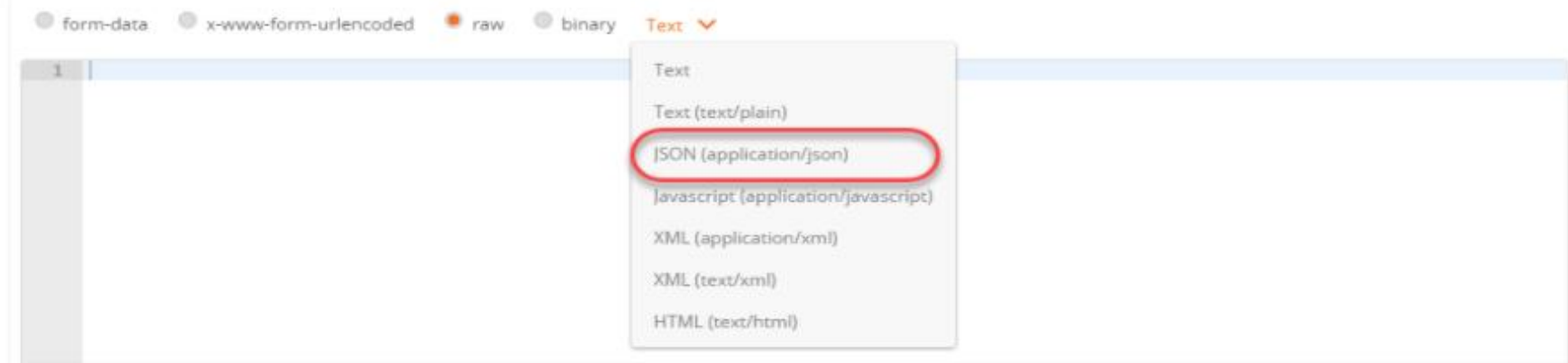
- Sending *GET* method instead of ***POST*** method for a ***POST Endpoint***.
- Sending ***POST Request*** without ***Body***.

POST Request using Postman- Continue....

- To add body to the POST Request, click on Body tab



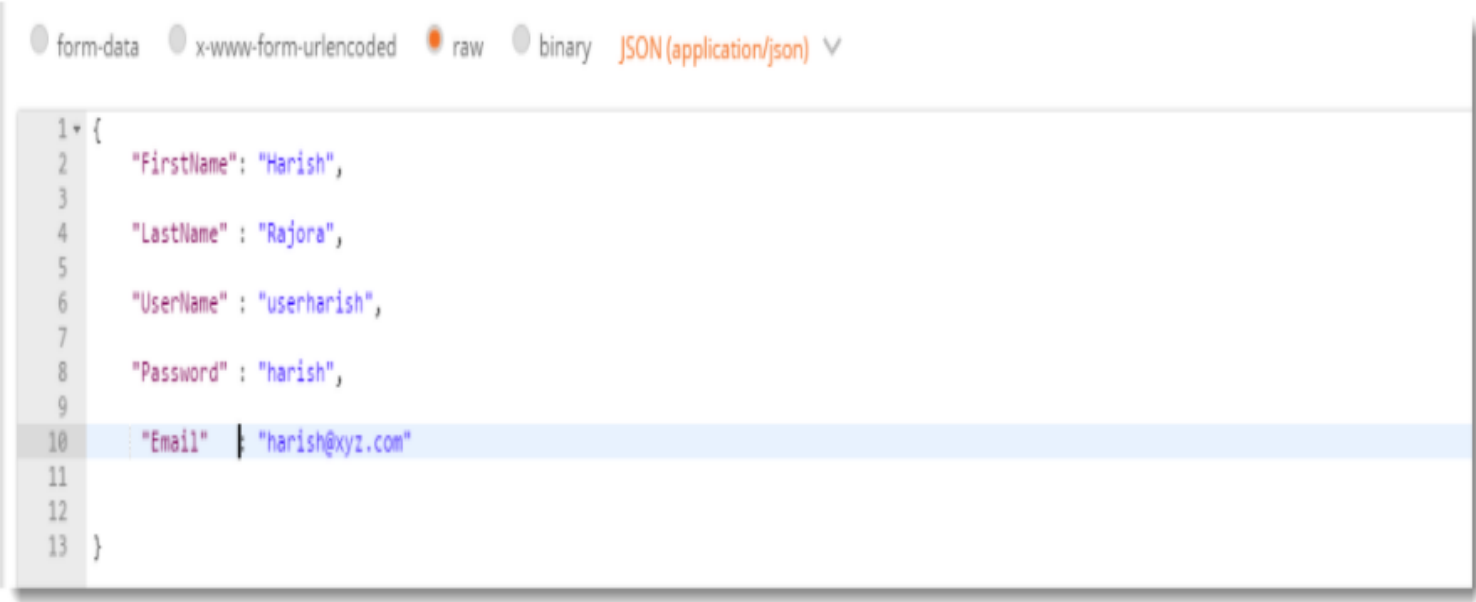
- Click on raw and select format type as **JSON**, since we have to send in correct format which the server expects.



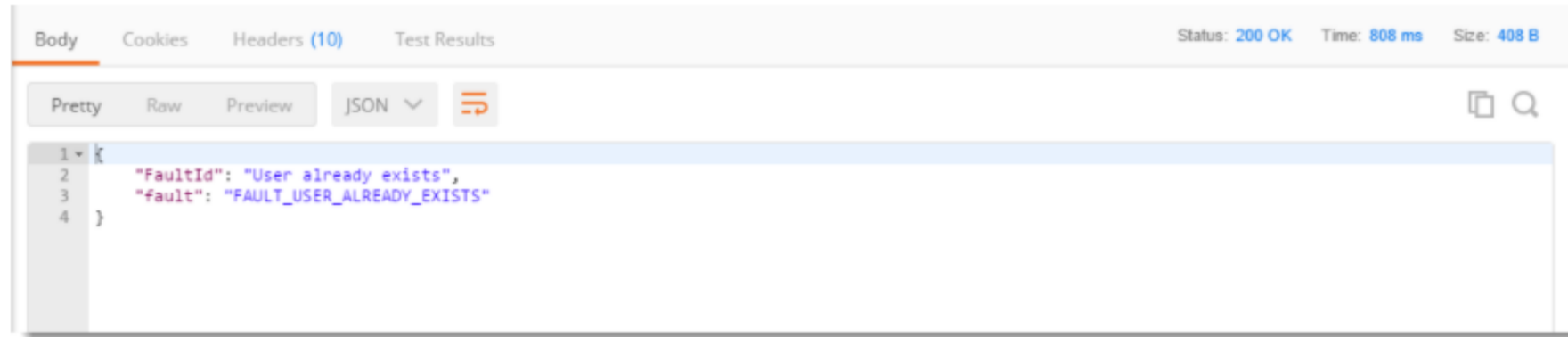
POST Request using Postman- Continue....

- This endpoint expects a **Json** body which contains the details of the new user. Below is a sample **Json** body. Copy and Paste the following in the body tab of Postman and change the attribute **value** to any value you want (take reference from the below image).

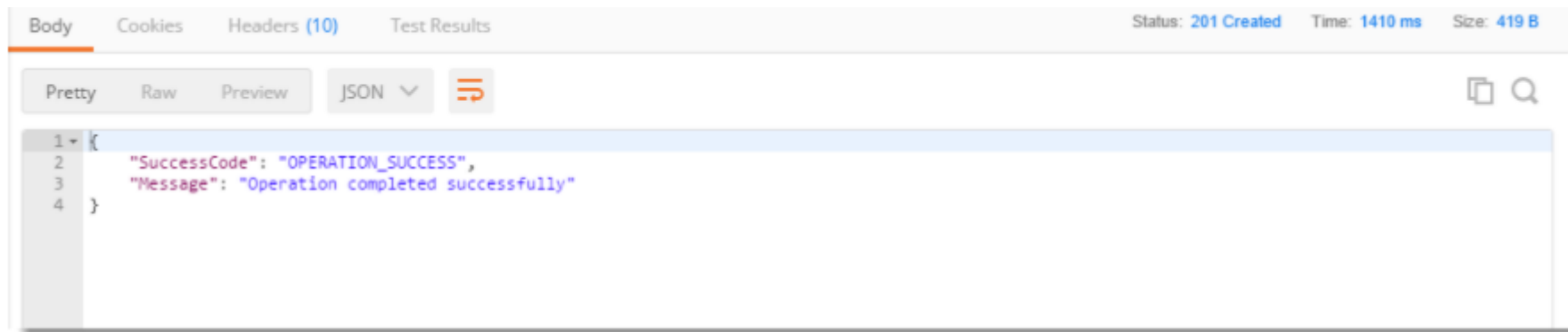
```
{  
  "FirstName" : "value"  
  "LastName" : "value",  
  "UserName" : "value",  
  "Password" : "value",  
  "Email"      : "Value"  
}
```



- Press **Send** and see the *Response Body* and *Response Status*.



- If the values are unique, you will get this response



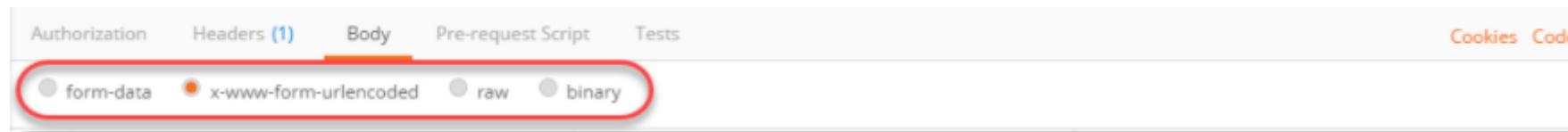
Different ways to send the data in a POST Request in Postman

- There can be different types of data and similarly, there are different ways of sending a data.
- Select the method request type as **POST** in the builder as shown.



Different ways to send the data in a POST Request in Postman

- As soon as you select the POST request type in Postman you will see that the option Body is enabled which has different options to send the data inside the body. These options are:
 - **Form-data**
 - **X-www-form-urlencoded**
 - **Raw**
 - **Binary**



Different ways to send the data in a POST Request in Postman- form-data

- Select ***form-data***
- Add the following *KEY-VALUE* pair

form-data

x-www-form-urlencoded

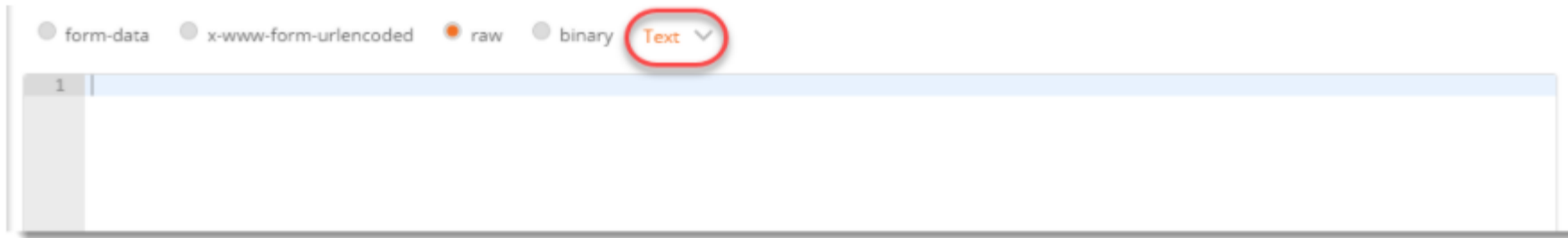
raw

binary

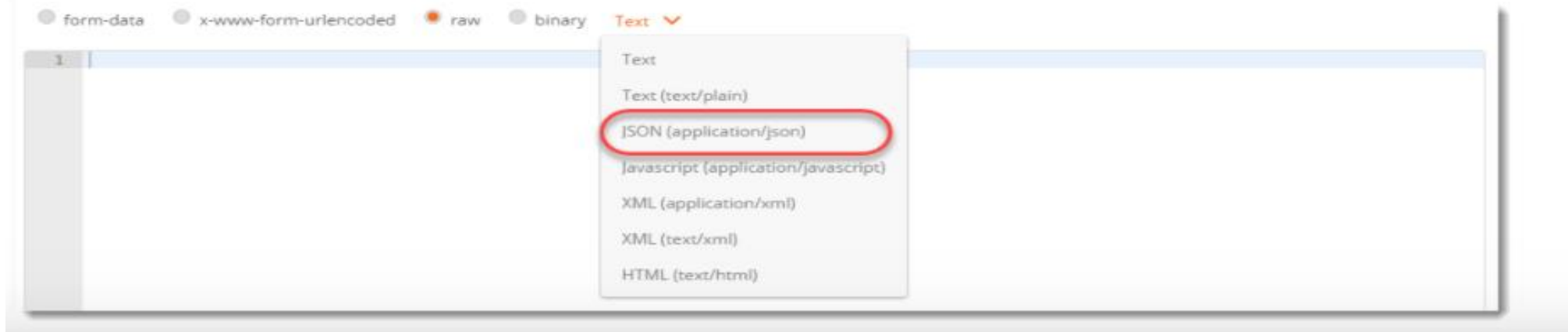
	Key		Value	Description	...	Bulk Edit
≡	<input checked="" type="checkbox"/> First name	Text ▾	Harish			✕
	<input checked="" type="checkbox"/> Last name		Rajora			
	New key		Value	Description		

Different ways to send the data in a POST Request in Postman- Raw

- Click on the dropdown besides **binary** and there can be seen all the options in which you can send the request



- Click on **JSON(application/json)**



Different ways to send the data in a POST Request in Postman- Raw Continue....

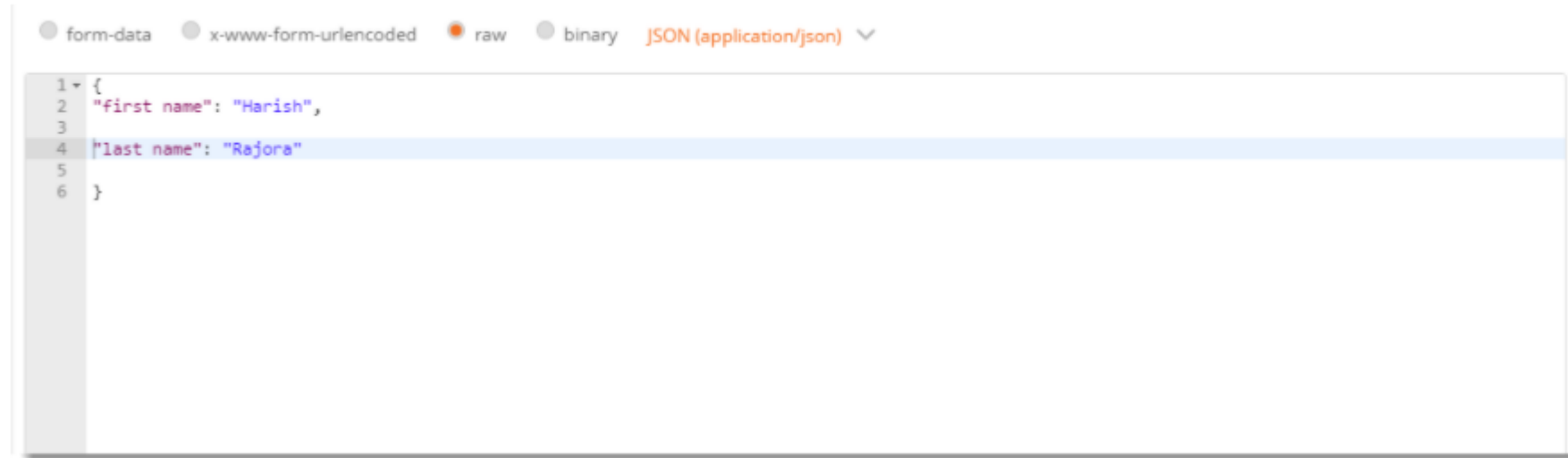
- In the editor below copy and paste this

```
{
```

```
  "first name": "Harish",
```

```
  "last name": "Rajora"
```

```
}
```



Different ways to send the data in a POST Request in Postman- Binary

- Click on **binary**, a *CHOOSE FILES* option will be available



- Choose any file, such as an image file.



Summary

- In this lesson, you have learnt:
 - Why Use Postman?
 - Download and Install Postman
 - How to use Postman
 - Create new Request in Postman
 - Get Request in Postman
 - How to deal with Response in Postman
 - POST Request using Postman

