

code

testing

response

security

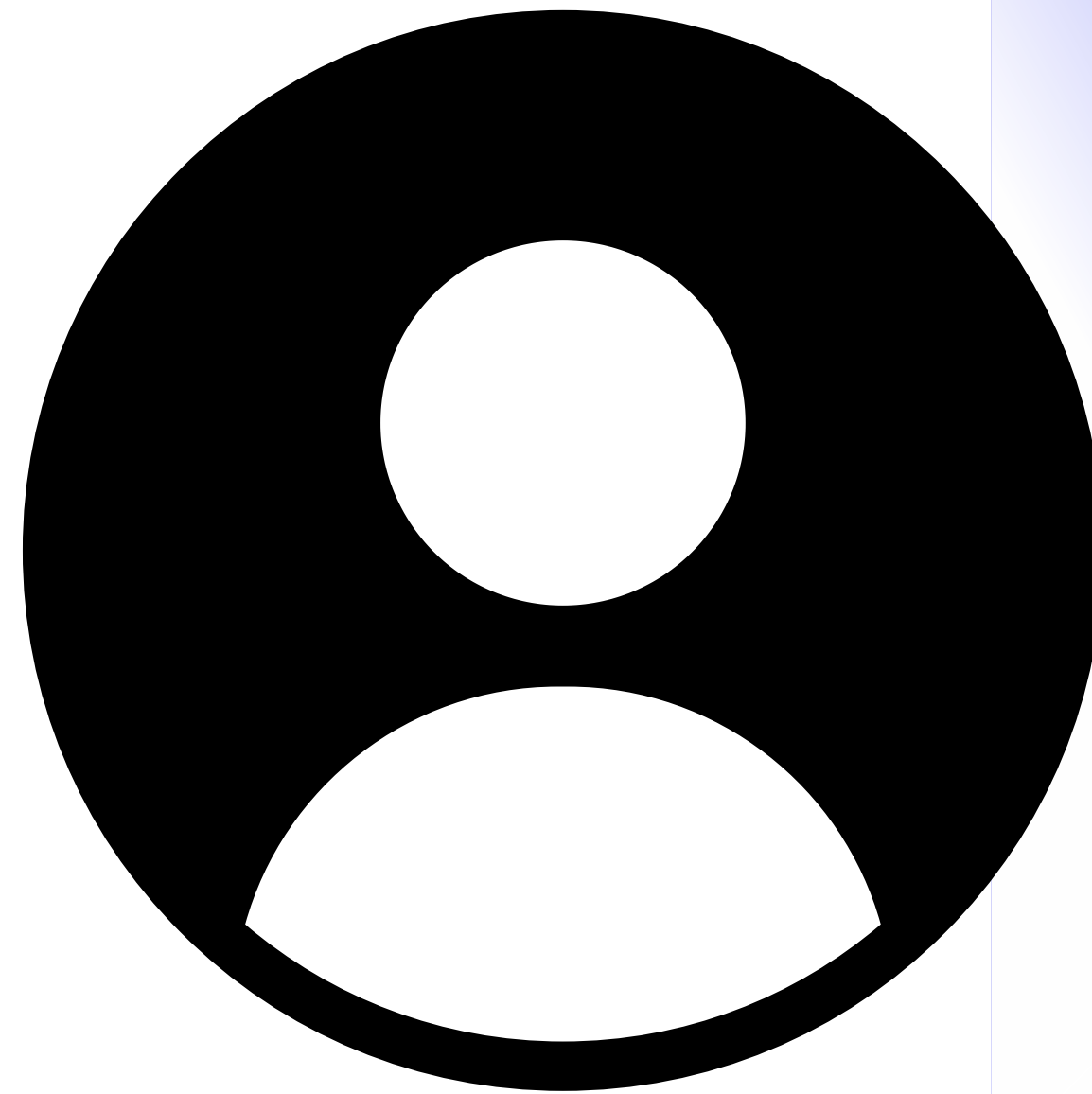
COMPREHENSIVE API TESTING WITH POSTMAN



step-by-step guide



angela1104.pythonanywhere.com



ADMIN

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The screenshot displays a REST client interface with a single tab for a POST request to `https://angela1104.pythonanywhere.com/api/register`. The request body is a JSON object with the following fields:

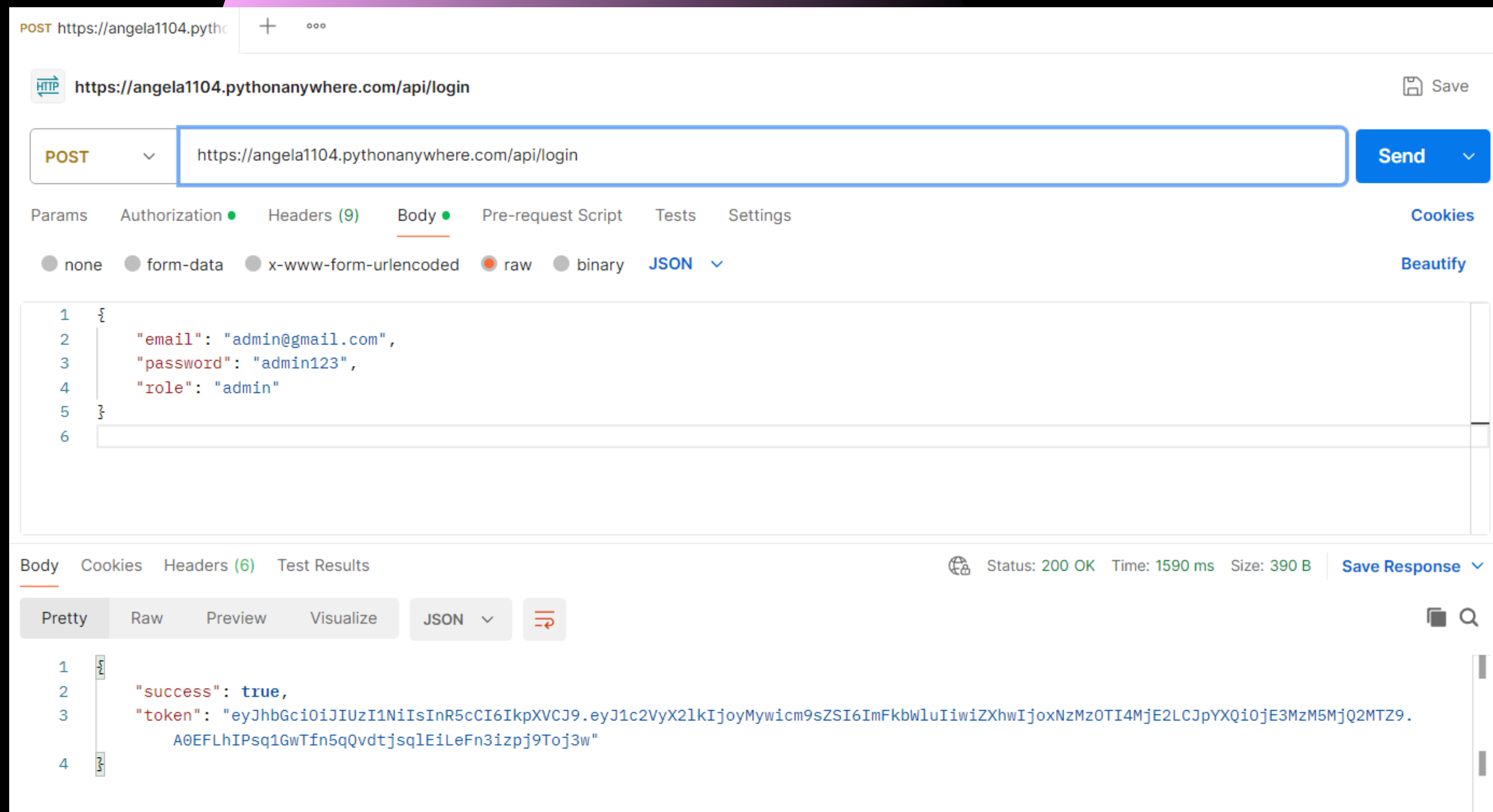
```
1 {  
2   "email": "admin@gmail.com",  
3   "password": "admin123",  
4   "role": "admin"  
5 }  
6
```

The response section shows a status of 201 CREATED, a time of 898 ms, and a size of 259 B. The response body is displayed in a pretty-printed JSON format:

```
1 {  
2   "message": "User registered successfully",  
3   "success": true  
4 }
```

On the right side of the interface, there are buttons for 'Save', 'Send', 'Cookies', and 'Beautify'.

Core Programming



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COURSES TABLE

Core Programming

The screenshot shows a web browser window with a REST client interface. The address bar displays the URL `https://angela1104.pythonanywhere.com/api/courses`. The interface includes a 'Send' button and tabs for 'Params', 'Authorization', 'Headers (9)', 'Body', 'Pre-request Script', 'Tests', and 'Settings'. The 'Authorization' tab is active, showing a 'Bearer Token' type and a token value: `eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJ1c2VyX2lkIjoyMywicm9sZSI6ImFkbWluliwiZXhwljoxNzMzOTI4MjE2LCJpYXQiOiE3MzM5MjQ2MTZ9.A0EFLhIPsq1GwTfn5qQvdtjsqLEiLeFn3izpj9Toj3w`. Below the token, there is a 'Store in Vault' button. The 'Body' tab is also active, showing a JSON response in 'Pretty' format. The response status is '200 OK' with a time of '2.30 s' and a size of '1.02 KB'. The JSON data is as follows:

```
1 {
2   "data": [
3     {
4       "course_description": "structure of compilers and interpreters.",
5       "course_id": 100,
6       "course_name": "Programming Language"
7     },
8     {
9       "course_description": "Wrong building item agreement benefit movement feel. Represent blood which rock keep enter rise. Glass
        prepare feel forward mission health especially. Animal best green play poor practice case. Move wife heavy risk age class
        low. Nothing media time perform.",
10      "course_id": 101,
11      "course_name": "Value address"
12    }
  ]
}
```

applications.

Core Programming

The screenshot shows a web browser window with a single tab titled "GET https://angela1104.pythor". The address bar displays the URL "https://angela1104.pythonanywhere.com/api/courses/100". Below the address bar, the "Send" button is visible. The "Authorization" tab is selected, showing a "Bearer Token" type and a token value "eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJ..." in a text box. Below the token, there is a link "Learn more about authorization" and a "Store in Vault" button. The "Body" tab is selected, showing the response in "JSON" format. The response is a JSON object with the following structure:

```
1 {
2   "data": {
3     "course_description": "structure of compilers and interpreters.",
4     "course_id": 100,
5     "course_name": "Programming Language"
6   },
7   "success": true
8 }
```

The status bar at the bottom right indicates "Status: 200 OK", "Time: 616 ms", "Size: 340 B", and a "Save Response" button.

applications.

Core Programming

The screenshot displays a REST client interface with a single tab for a POST request to `https://angela1104.pythonanywhere.com/api/courses`. The request body is a JSON object with the following structure:

```
{  "course_description": "essential for solving complex problems and enhancing productivity.",  "course_name": "Computers"}
```

The response is shown in the bottom panel, indicating a `201 CREATED` status with a response time of `927 ms` and a size of `360 B`. The response body is a JSON object:

```
{  "data": {    "course_description": "essential for solving complex problems and enhancing productivity.",    "course_id": 273,    "course_name": "Computers"  },  "success": true}
```

The interface includes tabs for Params, Authorization, Headers (9), Body, Pre-request Script, Tests, and Settings. The Body tab is active, showing the request and response in JSON format. The response is also displayed in a Pretty view.

applications.

Core Programming

The screenshot shows a REST client interface with a single tab for a PUT request to `https://angela1104.pythonanywhere.com/api/courses/273`. The request body is a JSON object with `course_description` and `course_name` fields. The response status is 200 OK, and the response body is a JSON object with `message` and `success` fields.

Request:

```
PUT https://angela1104.pythonanywhere.com/api/courses/273
```

Body:

```
{  "course_description": "(Updated)essential for solving complex problems and enhancing productivity.",  "course_name": "Computers"}
```

Response:

```
{  "message": "Course updated successfully",  "success": true}
```

Status: 200 OK **Time:** 388 ms **Size:** 253 B

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Core Programming

The screenshot displays a REST client interface with a single tab titled "DEL https://angela1104.pythonanywhere.com/api/courses/273". The URL bar shows the endpoint `https://angela1104.pythonanywhere.com/api/courses/273`. The request method is set to **DELETE**. The request body is a JSON object:

```
{
  "course_description": "(Updated)essential for solving complex problems and enhancing productivity.",
  "course_name": "Computers"
}
```

The response status is **200 OK** with a time of **558 ms** and a size of **261 B**. The response body is a JSON object:

```
{
  "message": "Course with ID 273 has been deleted",
  "success": true
}
```

The interface includes tabs for Params, Authorization, Headers (9), Body, Pre-request Script, Tests, and Settings. The Body tab is active, showing the request body. The response body is also shown in the bottom panel, with tabs for Body, Cookies, Headers (6), and Test Results. The response body is displayed in a Pretty view.

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STUDENTS TABLE

Core Programming

The screenshot shows a web browser window with a REST client interface. The address bar displays the URL `https://angela1104.pythonanywhere.com/api/students`. The interface includes a dropdown menu for the HTTP method (set to GET) and a button labeled "Send". Below the URL bar, there are tabs for "Params", "Authorization", "Headers (7)", "Body", "Pre-request Script", "Tests", and "Settings". The "Body" tab is selected, and the request body is empty. The response section at the bottom shows the status "200 OK", time "510 ms", and size "1.4 KB". The response body is displayed in a JSON format, showing an array of two student objects.

```
1  {
2    "data": [
3      {
4        "student_email": "johnathan32@example.net",
5        "student_firstName": "Roberto",
6        "student_id": 1,
7        "student_lastName": "Ruiz",
8        "student_password": "%GET&mzAF3"
9      },
10     {
11       "student_email": "danielwilson@example.org",
12       "student_firstName": "James",
13       "student_id": 2,
14       "student_lastName": "Robertson",
15       "student_password": "^!P1Zx02^$"
16     }
17   ]
18 }
```

Our team specializes in a variety of programming languages, Python for data science, JavaScript for web development, and systems applications.

Core Programming

The screenshot displays a REST client interface with the following details:

- URL:** `https://angela1104.pythonanywhere.com/api/students/1`
- Method:** `GET`
- Body:** Empty
- Response:** Status: `200 OK`, Time: `324 ms`, Size: `368 B`
- Response Body (JSON):**

```
1 {
2   "data": {
3     "student_email": "johnathan32@example.net",
4     "student_firstName": "Roberto",
5     "student_id": 1,
6     "student_lastName": "Ruiz",
7     "student_password": "%GET&mzAF3"
8   },
9   "success": true
10 }
```

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Core Programming

The screenshot displays a REST client interface with a POST request to `https://angela1104.pythonanywhere.com/api/students`. The request body is a JSON object containing student details. The response is a 201 CREATED status with a JSON body indicating successful creation of a student record.

Request:

```
POST https://angela1104.pythonanywhere.com/api/students
```

Body:

```
{  "student_email": "karenangela@gmail.com",  "student_firstName": "Karen Angela",  "student_lastName": "Realubit",  "student_password": "%GET&mz443"}
```

Response:

```
{  "data": {    "student_email": "karenangela@gmail.com",    "student_firstName": "Karen Angela",    "student_id": 193,    "student_lastName": "Realubit",    "student_password": "%GET&mz443"  },  "success": true}
```

Status: 201 CREATED | **Time:** 1025 ms | **Size:** 382 B

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Core Programming

The screenshot displays a REST client interface with the following details:

- URL:** `https://angela1104.pythonanywhere.com/api/students/193`
- Method:** `PUT`
- Body (JSON):**

```
1 {  
2   "student_email": "karenangela@gmail.com",  
3   "student_firstName": "(Updated)Karen Angela",  
4   "student_lastName": "Realubit",  
5   "student_password": "%GET&mz443"  
6 }
```
- Response (JSON):**

```
1 {  
2   "message": "Student updated successfully",  
3   "success": true  
4 }
```
- Status:** `200 OK`, **Time:** `483 ms`, **Size:** `254 B`

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Core Programming

The screenshot displays a REST client interface with the following details:

- URL:** `https://angela1104.pythonanywhere.com/api/students/193`
- Method:** `DELETE`
- Body:** Empty
- Response Status:** `200 OK`, Time: `889 ms`, Size: `262 B`
- Response Body (JSON):**

```
1 {  
2   "message": "Student with ID 193 has been deleted",  
3   "success": true  
4 }
```

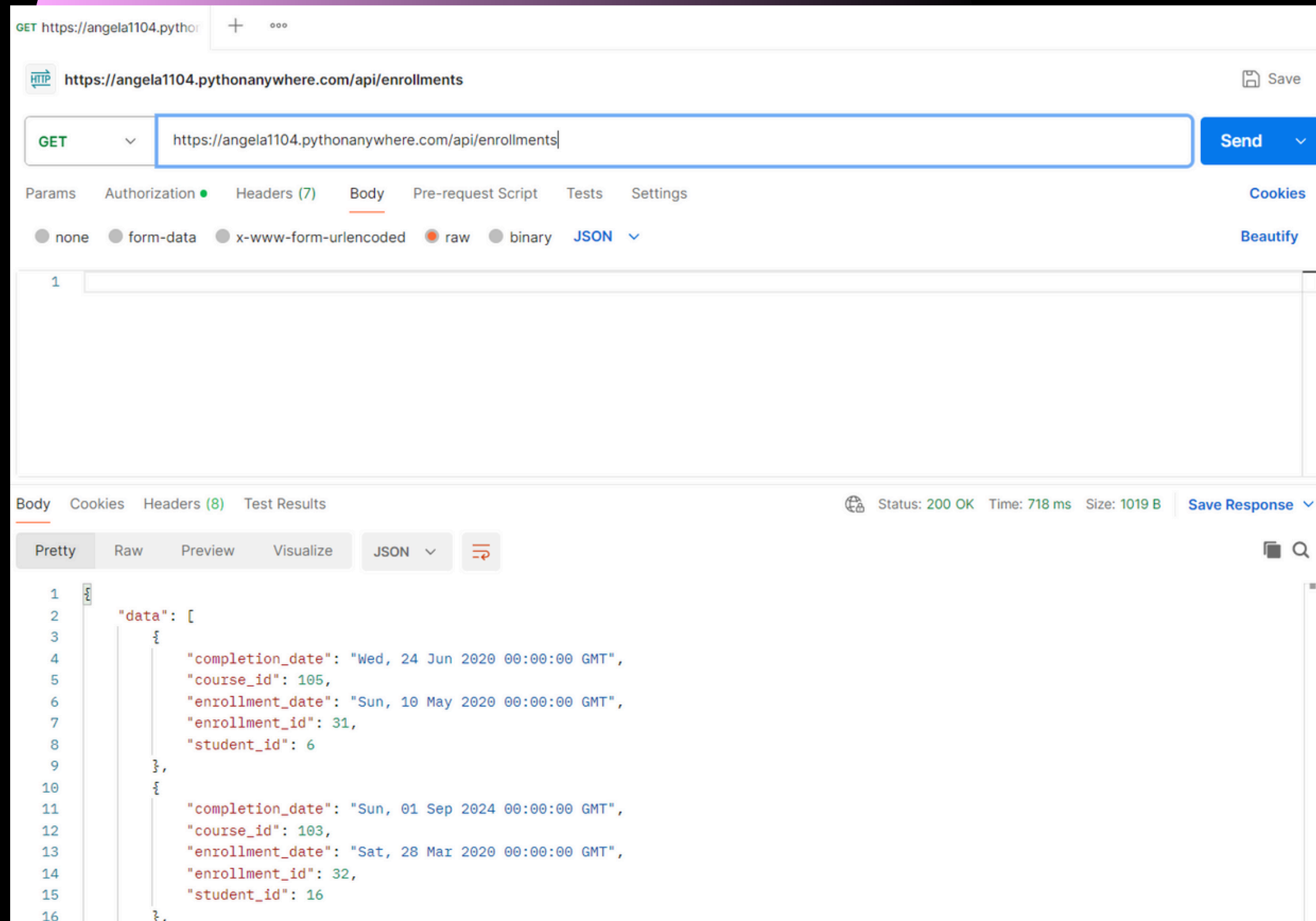
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ENROLLMENTS TABLE

Core Programming



Our team specializes in a variety of programming languages, Python for data science, JavaScript for web development, and systems for applications.

Core Programming

The screenshot shows a web browser window with a REST client interface. The address bar displays the URL `https://angela1104.pythonanywhere.com/api/enrollments/31`. The interface includes tabs for Params, Authorization, Headers (7), Body, Pre-request Script, Tests, and Settings. The Body tab is selected, and the request is configured as a GET request. The response is displayed in the bottom panel, showing a JSON object with the following structure:

```
1 {
2   "data": {
3     "completion_date": "Wed, 24 Jun 2020 00:00:00 GMT",
4     "course_id": 105,
5     "enrollment_date": "Sun, 10 May 2020 00:00:00 GMT",
6     "enrollment_id": 31,
7     "student_id": 6
8   },
9   "success": true
10 }
```

The status bar at the bottom indicates a successful response with status 200 OK, a time of 990 ms, and a size of 373 B. The response is saved and can be viewed in various formats (Pretty, Raw, Preview, Visualize).

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Core Programming

The screenshot displays a REST client interface with a single tab for a POST request to `https://angela1104.pythonanywhere.com/api/enrollments`. The request body is a JSON object with the following data:

```
1 {
2   "student_id": 1,
3   "course_id": 105,
4   "enrollment_date": "2024-06-11",
5   "completion_date": "2024-06-27"
6 }
```

The response section shows a status of 201 CREATED, a time of 413 ms, and a size of 341 B. The response body is displayed in a 'Pretty' JSON format:

```
1 {
2   "data": {
3     "completion_date": "2024-06-27",
4     "course_id": 105,
5     "enrollment_date": "2024-06-11",
6     "enrollment_id": 213,
7     "student_id": 1
8   },
9   "success": true
10 }
```

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Core Programming

The screenshot displays a REST client interface with the following details:

- Request:**
 - Method: PUT
 - URL: `https://angela1104.pythonanywhere.com/api/enrollments/213`
 - Body (JSON):

```
{  "student_id": 10,  "course_id": 105,  "enrollment_date": "2024-06-11",  "completion_date": "2024-06-27"}
```
- Response:**
 - Status: 200 OK
 - Time: 1754 ms
 - Size: 257 B
 - Body (JSON):

```
{  "message": "Enrollment updated successfully",  "success": true}
```

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Core Programming

The screenshot shows a web browser window with a REST client interface. The address bar displays the URL `https://angela1104.pythonanywhere.com/api/enrollments/213`. The interface includes a dropdown menu set to `DELETE` and a `Send` button. Below this, there are tabs for `Params`, `Authorization`, `Headers (7)`, `Body`, `Pre-request Script`, `Tests`, and `Settings`. The `Body` tab is selected, and the request body is empty. At the bottom, there are tabs for `Body`, `Cookies`, `Headers (6)`, and `Test Results`. The `Body` tab is selected, and the response is displayed in a `JSON` format. The response status is `200 OK` with a time of `603 ms` and a size of `265 B`. The response body is a JSON object: `{ "message": "Enrollment with ID 213 has been deleted", "success": true }`.

DEL `https://angela1104.pythor` + ...

`https://angela1104.pythonanywhere.com/api/enrollments/213` Save

`DELETE` `https://angela1104.pythonanywhere.com/api/enrollments/213` Send

Params Authorization Headers (7) Body Pre-request Script Tests Settings Cookies Beautify

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

1

Body Cookies Headers (6) Test Results Status: 200 OK Time: 603 ms Size: 265 B Save Response

Pretty Raw Preview Visualize JSON

```
1
2   "message": "Enrollment with ID 213 has been deleted",
3   "success": true
4
```

for applications.



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TEST_RESULTS TABLE

Core Programming

The screenshot shows a web browser's developer tools interface. The top section displays the HTTP request details: a GET request to `https://angela1104.pythonanywhere.com/api/test_results`. The request is sent, and the response is shown in the bottom section. The response is a JSON array with two test result objects. The status is 200 OK, the time is 1069 ms, and the size is 771 B.

Request:

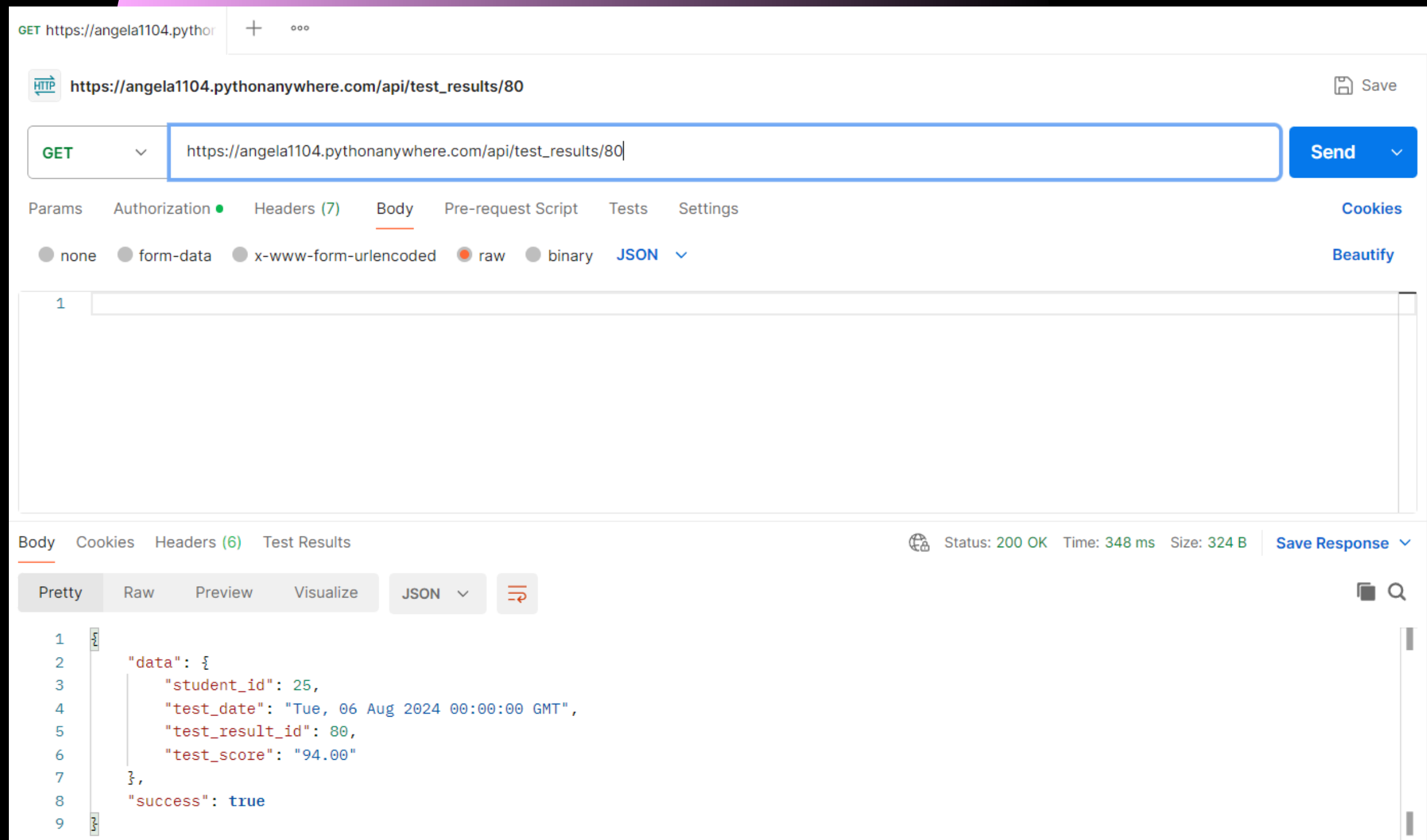
- Method: GET
- URL: `https://angela1104.pythonanywhere.com/api/test_results`

Response:

```
1 {
2   "data": [
3     {
4       "student_id": 25,
5       "test_date": "Tue, 06 Aug 2024 00:00:00 GMT",
6       "test_result_id": 80,
7       "test_score": "94.00"
8     },
9     {
10      "student_id": 25,
11      "test_date": "Sun, 27 Oct 2024 00:00:00 GMT",
12      "test_result_id": 81,
13      "test_score": "89.00"
14    }
15  ]
16 }
```

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Core Programming



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Core Programming

The screenshot displays a REST client interface with the following details:

- Request:**
 - Method: **POST**
 - URL: `https://angela1104.pythonanywhere.com/api/test_results`
 - Body (JSON):

```
{  "student_id": 25,  "test_date": "2024-11-08",  "test_score": 99}
```
- Response:**
 - Status: **201 CREATED**
 - Time: **707 ms**
 - Size: **306 B**
 - Body (JSON):

```
{  "data": {    "student_id": 25,    "test_date": "2024-11-08",    "test_result_id": 506,    "test_score": 99  },  "success": true}
```

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Core Programming

The screenshot displays a REST client interface with the following details:

- Request:**
 - Method: PUT
 - URL: `https://angela1104.pythonanywhere.com/api/test_results/506`
 - Body (JSON):

```
{  "student_id": 25,  "test_date": "2025-11-08",  "test_score": 99}
```
- Response:**
 - Status: 200 OK
 - Time: 343 ms
 - Size: 258 B
 - Body (JSON):

```
{  "message": "Test result updated successfully",  "success": true}
```

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Core Programming

The screenshot displays a REST client interface with a single tab for the URL `https://angela1104.pythonanywhere.com/api/test_results/506`. The HTTP method is set to `DELETE`. The request body is empty. The response status is `200 OK` with a time of `664 ms` and a size of `266 B`. The response body is formatted as JSON, showing a successful deletion message.

Request Details:

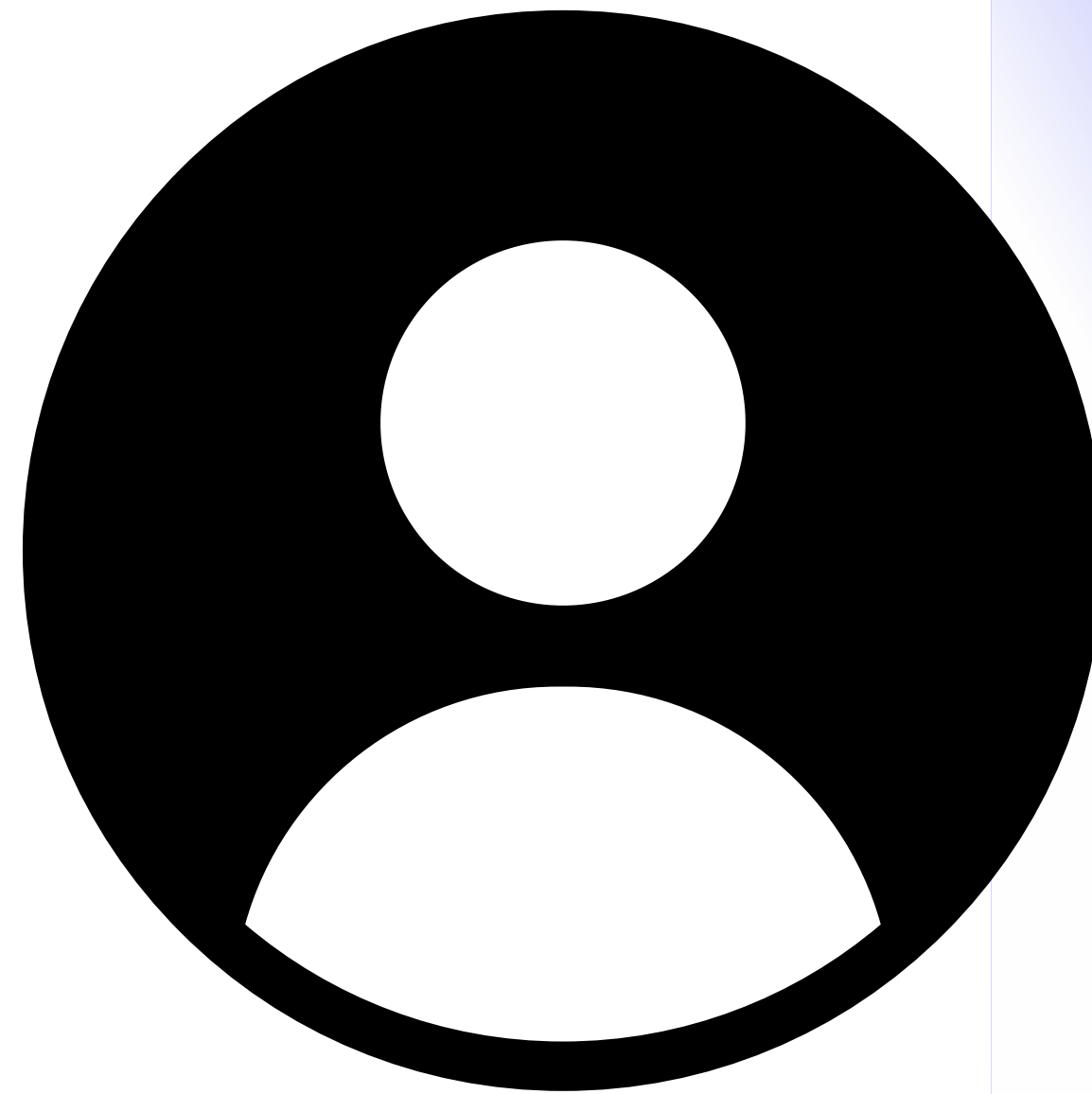
- Method: `DELETE`
- URL: `https://angela1104.pythonanywhere.com/api/test_results/506`
- Body: (Empty)

Response Details:

- Status: `200 OK`
- Time: `664 ms`
- Size: `266 B`
- Body (JSON):

```
{  "message": "Test result with ID 506 has been deleted",  "success": true}
```

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STUDENTS

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The screenshot displays a REST client interface with a single tab for a POST request to `https://angela1104.pythonanywhere.com/api/register`. The request body is a JSON object with the following fields:

```
{
  "email": "student@gmail.com",
  "password": "student123",
  "role": "student"
}
```

The response status is 201 CREATED, with a time of 2.54 s and a size of 259 B. The response body is a JSON object:

```
{
  "message": "User registered successfully",
  "success": true
}
```

The interface includes tabs for Params, Authorization, Headers (9), Body, Pre-request Script, Tests, and Settings. The Body tab is selected, and the request body is formatted as JSON. The response body is also formatted as JSON. The interface includes a 'Send' button and a 'Save' button. The response status is 201 CREATED, with a time of 2.54 s and a size of 259 B. The response body is a JSON object.

The screenshot displays a REST client interface with a single tab for a POST request to `https://angela1104.pythonanywhere.com/api/login`. The request body is a JSON object with the following fields:

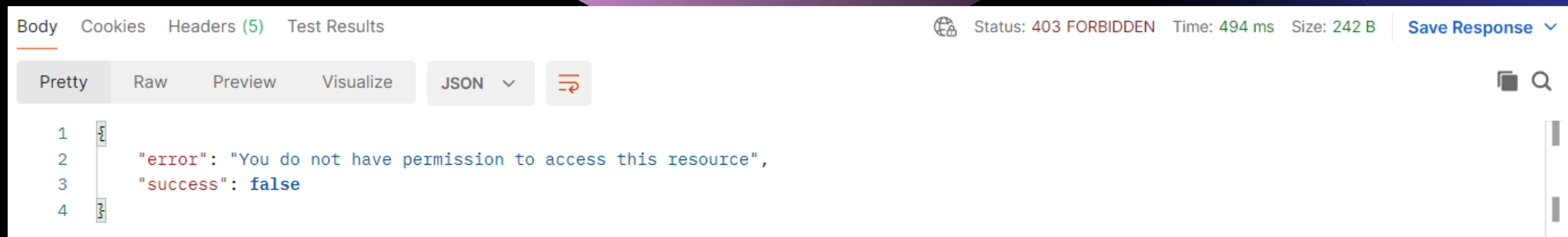
```
{
  "email": "student@gmail.com",
  "password": "student123",
  "role": "student"
}
```

The response is shown in the bottom panel, indicating a `200 OK` status with a response time of `1246 ms` and a size of `393 B`. The response body is a JSON object containing a success flag and a token:

```
{
  "success": true,
  "token": "eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJ1c2VyX2lkIjoyNCwicm9sZSI6InN0dWRlbnQiLCJleHAiOjE3MzM5MzAwOTIsImhhdCI6MTczMzkyNjQ5Mn0.LDw4YjkiKB98TyXkwSJI09tjf6Wt35tHvG6xmLhFct58"
}
```

Only the GET method students can access.

POST, PUT, and DELETE



Thank You