



# Cryptography Project

## Fetch & Post Data

### GET Get Customer Details

{{url}}/customers/Johnson

StartFragment

- **Description:** Retrieves vehicle information based on the owner's name.
- **Method:** GET
- **URL:** /customers/
- **Parameters:** name (string) - Owner's name
- **Response:** Returns a JSON object containing vehicle details for the specified owner.

EndFragment

### POST Set New Vehicle Data

{{url}}/vehicleInfo

## Vehicle Information Endpoint

Plain Text

This **POST** request is used to add vehicle information. The r

### Request Body

- `vehicleName` (text, required): The name of the vehicle.
- `ownerName` (text, required): The name of the owner of the vehicle.

### Response

- Status: 200
- Content-Type: application/json

- `message` (string): A message indicating the status of the request.

## Body raw (json)

---

```
json

{
  "vehicleName": "i-92",
  "ownerName": "Erica Jones"
}
```

---

## GET Get Transaction Data

{{url}}/payments/9e580531-0447-4add-9fdd-a22360cf4a1a

StartFragment

- **Description:** Retrieves transaction data for a specific vehicle. This endpoint retrieves payment details for a specific payment ID. The response will include information such as the last battery switch, owner name, payment ID, vehicle ID, and vehicle name.
- **Method:** GET
- **URL:** /payments/
- **Parameters:** vehicleId (string) - Vehicle ID
- **Response:** Returns a JSON object containing transaction details for the specified vehicle.

EndFragment

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## POST Add or Edit Timestamp

{{url}}/transactions/9e580531-0447-4add-9fdd-a22360cf4a1a

StartFragment

- **Description:** Adds or updates the timestamp and payment ID for a vehicle's transaction.
- **Method:** POST
- **URL:** /transactions/
- **Parameters:** vehicleId (string) - Vehicle ID
- **Response:** Returns a JSON object with a message indicating success or failure.

EndFragment

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## GET Verify Data

{{url}}/verify/9e580531-0447-4add-9fdd-a22360cf4a1a

This endpoint sends an HTTP GET request to the specified URL to verify a specific item with the given identifier.

Upon successful execution, the API returns a 200 status with a JSON response containing a message.

StartFragment

- **Description:** Verifies the integrity of transaction data using cryptographic signatures.
- **Method:** GET
- **URL:** /verify/
- **Parameters:** vehicleId (string) - Vehicle ID
- **Response:** Returns a JSON object with a message indicating whether data integrity verification succeeded or failed.

EndFragment

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## Blockchain

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### GET Full Chain

{{url}}/chain

StartFragment

- **Description:** Retrieves the full blockchain.
- **Method:** GET
- **URL:** /chain
- **Response:** Returns a JSON object containing the full blockchain and its length.

EndFragment

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### GET Mine

{{url}}/mine

StartFragment

- **Description:** Mines a new block for the blockchain.
- **Method:** GET
- **URL:** /mine
- **Response:** Returns a JSON object with details of the newly mined block.

EndFragment

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## POST New Blockchain Transaction

{{url}}/transactions/new

Description: Creates a new transaction for the blockchain.

Method: POST

URL: /transactions/new

Request Body: JSON object containing sender (string), recipient (string), and data (string).

```
{ "sender": "sender_address", "recipient":  
"recipient_address", "data": "transaction_data" }
```

Response: Returns a JSON object with a message indicating success and the index of the block where the transaction will be added.

**Body** raw (json)

---

json

```
{  
  "sender": "X233",  
  "recipient": "y567",  
  "data": "ACV"  
}
```

---

## POST Register Nodes

{{url}}/nodes/register

### POST /nodes/register

StartFragment

- **Description:** This endpoint is used register new nodes to the blockchain network.
- **Method:** POST
- **URL:** /nodes/register

EndFragment

## Request Body

- raw (application/json)
  - nodes (array): An array of nodes to be registered.

## Response

- Status: 201
- Content-Type: application/json
  - message (string): A message indicating the result of the registration.
  - total\_nodes (array): An array containing the total registered nodes.

## Body raw (json)

---

json

```
{
  "nodes": [
    "http://node1.example.com",
    "http://node2.example.com",
    "http://node3.example.com"
  ]
}
```

---

## GET Consensus

{{url}}/nodes/resolve

StartFragment

- **Description:** Resolves conflicts among nodes in the blockchain network.
- **Method:** GET
- **URL:** /nodes/resolve
- **Response:** Returns a JSON object with a message indicating whether the chain was replaced or not, along with the new chain if applicable.

EndFragment