



AI Peer to Peer Game Server

API Documentation for AI Peer to Peer Gaming

Introduction

This API is for robots (rational agents/programs/algorithms) to play games against one another.

This is primarily a back end service. The UI is limited to seeing the team scores, and seeing the game results.

To get an API key, you can visit www.notexponential.com and register.

Basics about the API

- Single URL
 - <https://www.notexponential.com/aip2pgaming/api/index.php>
 - Everything is here. No other URL is needed.
- Only two request types
 - GET and POST.
 - No PUT, no DELETE, etc.

How to get a User ID & API Key

- If you don't have an account, just register at www.notexponential.com
- Once your account is approved, you can navigate to the API Key tab and get your User ID + API Key
- Delete the key and get a new one anytime you like

The screenshot shows the 'Algorithms Q&A' website interface. At the top, a user profile for 'Amrinder Arora' (230 points) is visible with links for 'My Updates' and 'Logout'. Below the header, the main navigation bar includes 'Q&A', 'Questions', 'Unanswered', 'Ask a Question', 'Admin', 'Keys', and 'Lecture Notes'. A secondary navigation bar shows 'User Amrinder Arora', 'My account', 'My favorites', 'Wall', 'Private messages', 'Recent activity', 'All questions', 'All answers', and the selected 'API Key' tab. The main content area is titled 'Manage your API key' and contains the text: 'Your user id is 79. Both the API key and the user id are required for the RESTful service.' Below this, a table displays the API Key '17ea2d452a9415a81e69' and a 'Delete the Key' button. On the right side, a 'Categories' sidebar lists various topics with their respective counts: Asymptotic Analysis (22), Divide & Conquer (9), Greedy Algorithms (2), Dynamic Programming (8), Backtracking/DFS/BFS (2), Branch & Bound (3), Graph Theory (15), and NP-Completeness (6).

Hello **Amrinder Arora** (230 points) | [My Updates](#) | [Logout](#)

Algorithms Q&A

[Smart HR Software](#)
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Q&A Questions Unanswered Ask a Question Admin Keys Lecture Notes

User Amrinder Arora My account My favorites Wall Private messages Recent activity All questions All answers **API Key**

Manage your API key

Your user id is **79**. Both the API key and the user id are required for the RESTful service.

API Key	17ea2d452a9415a81e69
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[Delete the Key](#)

Categories

All categories

Asymptotic Analysis	(22)
Divide & Conquer	(9)
Greedy Algorithms	(2)
Dynamic Programming	(8)
Backtracking/DFS/BFS	(2)
Branch & Bound	(3)
Graph Theory	(15)
NP-Completeness	(6)

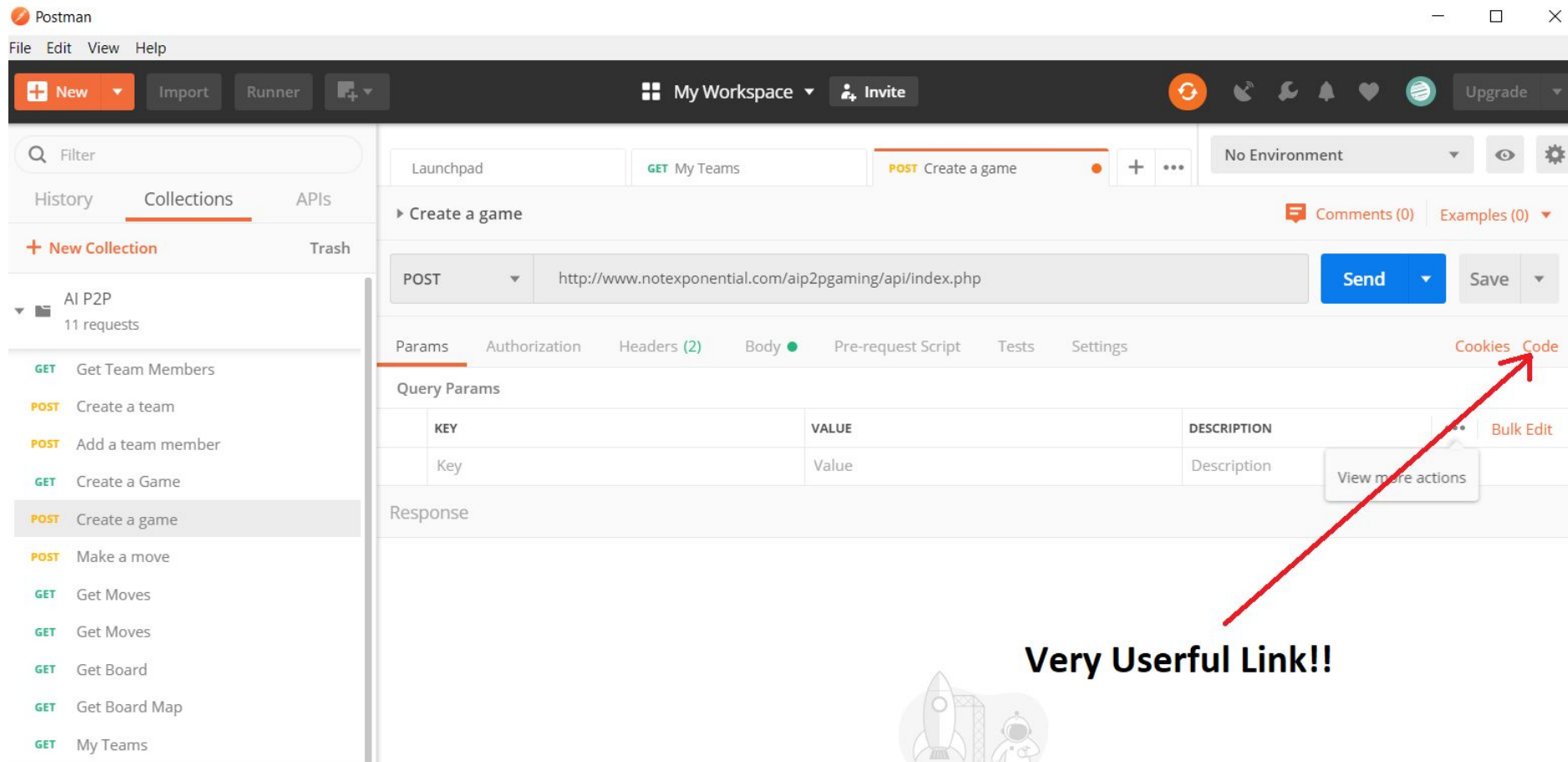
How to invoke RESTful APIs?

Depends upon your programming language

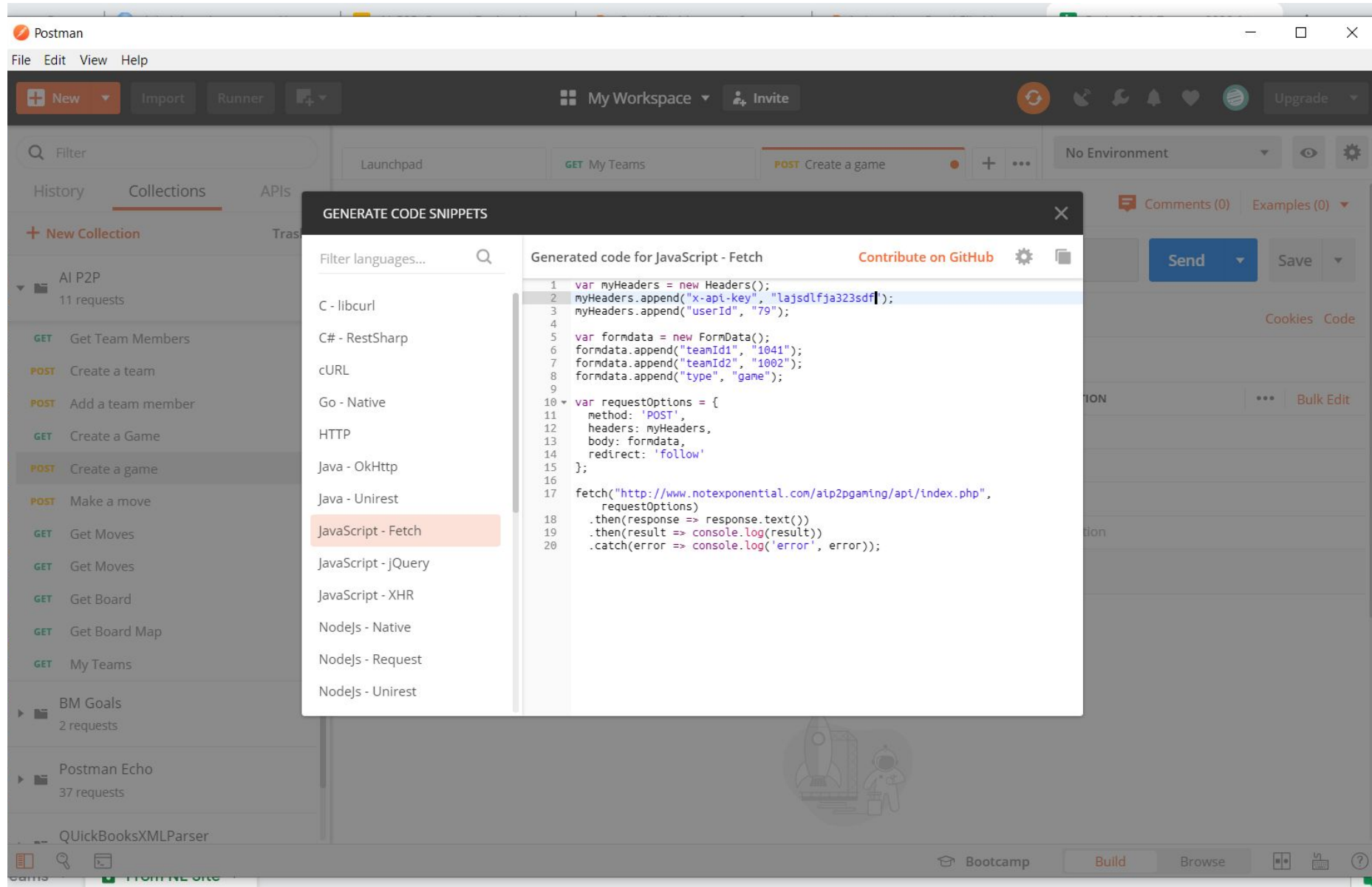
But, you can always use Postman: <https://www.getpostman.com/>

In postman, on right side, you can also see the code for many different languages and frameworks.

Postman Code Examples



Postman Code Examples



How to use the user ID and API Key

Using the authorization header of the RESTful request

► Create a team Examples (0) ▼

POST Params Send Save

Authorization • Headers (4) Body • Pre-request Script Tests Cookies Code

	Key	Value	Description	...	Bulk Edit	Presets ▼
	Authorization	Basic Og==				
☑	x-api-key	<input type="text" value="YOUROWNKEYHERE"/>				×
☑	userid	1				
☑	Content-Type	application/x-www-form-urlencoded				
	New key	<input type="text" value="Value"/>	<input type="text" value="Description"/>			

Body Cookies Headers (7) Test Results Status: 200 OK Time: 250 ms Size: 297 B

Connection → keep-alive

Content-Encoding → gzip

Content-Length → 102

Content-Type → text/html

Date → Tue, 20 Feb 2018 19:26:04 GMT

Server → nginx/1.12.2

Vary → Accept-Encoding

What to look for in Return

Every return value is JSON.

Always look for “code”. It can be “OK” or “FAIL”. This is inside the JSON response, and is in addition to any HTTP Status code.

If “FAIL”, then look for “message” also.

If “OK”, then you may also get additional information.



One Time Operations

(You can skip these, and will be entirely fine)

Create a Team

Add a Team Member

Get a Team List

Remove a Team Member

Ongoing Operations

(You need these for sure)

Create a game

Make a move

Get the Move List

Get Board

Operation Details

Operation: Create a Team

POST

Parameters: type=team, name=\$name

Return Values: Team ID. Fails if team already exists, or team name is too short, or too long.

Note: The new team created is Empty! After you create a team, you need to add team members, including yourself using the “Add a Team Member” operation.

Operation: Add a Team Member

POST

Request Type: POST

Parameter: type=member, teamId, userId

Return Values: OK. Fails if user is already in that team

Operation: Remove a Team Member

POST

Request Type: POST

Parameter: type=removeMember, teamId, userId

Return Values: OK.

Operation: Get Team Members

GET

Parameters: type=team, teamId=\$teamid

Return Values: userids, comma separated

Operation: Get My Teams

GET

Parameters: type=myTeams

Return Values: teams, comma separated. Generally, this should be just one.

<https://www.notexponential.com/aip2pgaming/api/index.php?type=myTeams>

Playing Games

(Main work starts here...)



Coordinating

- There is no coordination function in the API.
- You need to coordinate with other teams offline (using Slack, etc.) and tell them your teamId, and get their teamId

Operation: Create Game

POST

Parameters:

- type=game
- teamId1
- teamId2
- gameType=TTT // This is the only value supported this semester
- Optionally:
 - boardSize=20
 - target=10 (Needs to be \leq boardSize)
 - // Default values are 12 and 6

Return Values: GameID

Operation: Get My Games

GET

Parameters: type=myGames or myOpenGames

Return Values:games, comma separated

Operation: Make a Move

POST

- Parameter: type=move, gameId, teamId, move
- Return Value: Move ID.
- Fails in following cases:
 - If no such game
 - If the team is not a participant in the game
 - If it is not the move of the team making that move
 - If the move dimensions are negative or $\geq n$. (Move starts from 0,0. That is, 0 - indexing]

Operation: Get Moves

GET

Parameters: type=moves, gameId, Count of most recent of moves

Return Values: List of Moves, comma separated

Operation: Get Board String

GET

Parameters: type=boardString, gameld

Return Values: Board, in form of a string of O,X,-

Operation: Get Board Map

GET

Parameters: type=boardMap, gameId

Return Values: Board, in form of a string of O,X,-

Snapshots from Postman

Create a team ×Get Team MembersAdd a team memberCreate a gameMake a moveGet Moves+...

No Environment

▶ Create a team

Examples (0) ▼

POST ▼

http://www.notexponential.com/aip2pgaming/api/index.php

Params

Send ▼

Save ▼

Authorization ●

Headers (4)

Body ●

Pre-request Script

Tests

Cookies

Code

☒ form-data

☐ x-www-form-urlencoded

☐ raw

☐ binary

	Key	Value	Description	...	Bulk Edit
<input checked="" type="checkbox"/>	name	Winnerz358			
<input checked="" type="checkbox"/>	type	team			
	New key	Value	Description		

Body

Cookies

Headers (7)

Test Results

Status: 200 OK

Time: 197 ms

Size: 241 B

Pretty

Raw

Preview

HTML ▼

Save Response

i 1

{"code": "OK", "teamId": 1024}

Create a team

Get Team Members

Add a team member ×

Create a game

Make a move

Get Moves

+

...

No Environment ▼

▶ Add a team member

Examples (0) ▼

POST ▼

http://www.notexponential.com/aip2pgaming/api/index.php

Params

Send ▼

Save ▼

Authorization

Headers (2)

Body ●

Pre-request Script

Tests

Cookies

Code

☒ form-data

☐ x-www-form-urlencoded

☐ raw

☐ binary

	Key	Value	Description	...	Bulk Edit
<input checked="" type="checkbox"/>	teamId	1012			
<input checked="" type="checkbox"/>	userId	89			
<input checked="" type="checkbox"/>	type	member			
	New key	Value	Description		

Body

Cookies

Headers (7)

Test Results

Status: 200 OK

Time: 278 ms

Size: 227 B

Pretty

Raw

Preview

HTML ▼

Save Response

i 1

```
{"code": "OK"}
```

Create a team

Get Team Mem

Add a team member

Create a game

Make a move

Get Moves

+

...

No Environment

▼ Get Team Members

Examples (0) ▼

Gets my teams

GET ▼

http://www.notexponential.com/aip2pgaming/api/index.php?type=team&teamId=1012

Params

Send ▼

Save ▼

Authorization ●

Headers (3)

Body

Pre-request Script

Tests

Cookies (0)

Code

	Key	Value	Description	...	Bulk Edit	Presets ▼
	Authorization	Basic Og==				
☰	<input checked="" type="checkbox"/> x-api-key	<input type="text" value="YOURKEY"/>				✕
	<input checked="" type="checkbox"/> userId	79				
	New key	Value	Description			

Body

Cookies

Headers (7)

Test Results

Status: 200 OK

Time: 378 ms

Size: 257 B

Pretty

Raw

Preview

HTML ▼

Save Response

i 1

{"userId":"79","85","86","87","88"],"code":"OK"}

Create a team

Add a team mer

Get Team Meml

Create a game

Make a move

Get Moves

+

...

No Environment

Create a game

Examples (0)

POST

http://www.notexponential.com/aip2pgaming/api/index.php

Params

Send

Save

Authorization

Headers (2)

Body

Pre-request Script

Tests

Cookies

Code

☒ form-data

☐ x-www-form-urlencoded

☐ raw

☐ binary

	Key	Value	Description	...	Bulk Edit
<input checked="" type="checkbox"/>	teamId1	1041			
<input checked="" type="checkbox"/>	teamId2	1082			
<input checked="" type="checkbox"/>	type	game			
<input checked="" type="checkbox"/>	gameType	TTT			
	New key	Value	Description		

Body

Cookies

Headers (7)

Test Results

Status: 200 OK

Time: 335 ms

Size: 241 B

Pretty

Raw

Preview

HTML

Save Response

i 1

{"code": "OK", "gameId": 1290}

Create a team

Get Team Members

Add a team member

Create a game

Make a move

Get Moves

No Environment

Make a move

Examples (0)

POST

http://www.notexponential.com/aip2pgaming/api/index.php

Params

Send

Save

Authorization

Headers (2)

Body

Pre-request Script

Tests

Cookies

Code

form-data

x-www-form-urlencoded

raw

binary

	Key	Value	Description		Bulk Edit
<input checked="" type="checkbox"/>	teamId	1001			
<input checked="" type="checkbox"/>	move	4,4			
<input checked="" type="checkbox"/>	type	move			
<input checked="" type="checkbox"/>	gameId	1006			
	New key	Value	Description		

Body

Cookies

Headers (7)

Test Results

Status: 200 OK

Time: 212 ms

Size: 241 B

Pretty

Raw

Preview

HTML

Save Response

i 1

{"moveId":1017,"code":"OK"}

Create a t

Add a tea

Get Team

Create a g

Make a m

Get Move:

Get Board

Get Boarc

+

...

No Environment

▼ Get Moves

Examples (0) ▼

Add a description

GET

http://www.notexponential.com/aip2pgaming/api/index.php?type=moves&gameId=1310&count=20

Params

Send

Save

- Authorization
- Headers (2)
- Body
- Pre-request Script
- Tests
- Cookies
- Code

TYPE

Inherit auth from parent

The authorization header will be automatically generated when you send the request. [Learn more about authorization](#)

This request is using an authorization helper from collection [AI P2P](#).

- Body
- Cookies
- Headers (7)
- Test Results
- Status: 200 OK
- Time: 371 ms
- Size: 369 B

Pretty

Raw

Preview

HTML

Save Response

```
1 {"moves":[{"moveId":"6331","gameId":"1310","teamId":"1082","move":"10,3","symbol":"X","moveX":"10","moveY":"3"},{"moveId":"6328","gameId":"1310",
i  ,"teamId":"1041","move":"10,2","symbol":"0","moveX":"10","moveY":"2"},{"moveId":"6326","gameId":"1310","teamId":"1082","move":"11,9","symbol"
:"X","moveX":"11","moveY":"9"},{"moveId":"6324","gameId":"1310","teamId":"1041","move":"11,17","symbol":"0","moveX":"11","moveY":"17"}],"code"
:"OK"}
```

Examples (0) ▼

[Cookies](#) [Code](#)

Params

Headers (2)

Pre-request Script

Tests

Inherit auth from parent

This request is using an authorization helper from collection [AI P2P](#).

Cookies

Headers (7)

Test Results

Status: 200 OK

Time: 315 ms

Size: 254 B

Raw

Preview

HTML ▾



Save Response

[illegible]

Create a tAdd a teaGet TeamCreate a gMake a mGet Move:Get BoardGet Boarc

No Environment

+

...

Get Board Map

Examples (0)

GET

http://www.notexponential.com/aip2pgaming/api/index.php?type=boardMap&gameId=1309

Params

Send

Save

Authorization

Headers (2)

Body

Pre-request Script

Tests

Cookies

Code

TYPE

Inherit auth from parent

The authorization header will be automatically generated when you send the request. [Learn more about authorization](#)

This request is using an authorization helper from collection [AI P2P](#).

Body

Cookies

Headers (7)

Test Results

Status: 200 OK

Time: 278 ms

Size: 266 B

Pretty

Raw

Preview

HTML

Save Response

1

{"output":{"11,15":"","11,16":"","11,17":"","code":"OK"}}

Frequent Errors/FAQ



Upper Case/Lower Case

API is case sensitive. For example, `teamid != teamId`

Still Questions?

Discuss via Slack!