



Bureau of Alien Intelligence
7th Floor
5 Merchant Square West
London
W2 1AS

Agent,

As you are probably aware cows have been disappearing across the world. The global news networks have been reporting that this is due to a contagious disease causing rapid death and decomposition leaving next to no trace of organic remains. I am authorised to disclose to you that we leaked this story as a cover to hide a horrible truth.

We have been tracking unusual anomalies that we have identified as alien spacecraft. It seems that over the past month the aliens have been visiting the Earth and taking our cows back to their home planet. Unfortunately we know very little about them and we have not been able to pinpoint the destination of the craft. The only information we have comes from a man calling himself the "Cheese King"; he is alleging to have been abducted by the aliens and to have travelled on one of their spacecraft. I have included an extract from a transcript of an interview with this man; you may find it useful.

"One minute I was sitting drinking a beer and the next minute, BOOM, I'm on board this alien spacecraft. These dudes are crazy about two things, man, Cheese Burgers and Elvis. They also have some pretty crazy taste in wallpaper.

Did they tell me anything? Well, yeah, I kinda couldn't understand them but there was this one thing I managed to pick up. It turns out the universe is square, square and flat, man! I guess that Greek math dude was totally wrong."

From what the "Cheese King" has told us the craft moves in increments of 1 unit. He has also stated that the craft can only move forwards and turn to the left and the right rotating 90 degrees each time. We know the universe

is 10 units wide by 10 units long, but I'm afraid we know little more.

Although we have not managed to track the final position of the alien craft we have managed to track its movements. The last position we managed to track for the aliens is row 1 column 0; this was after the craft had made its first move. In the data you will receive, you will get all these movements including the first.

We need you to write us a navigation system for the probe that will allow us to calculate the destination of the alien spacecraft. Once we have gathered further intelligence on the aliens we will be in a stronger position to formulate a rescue plan.

I have granted you secure access to our mission control API's, you can use these to collect the last movements we have for the alien craft and also use them to submit the final coordinates back to us.

NOTE: This is a live system; we have not had time to create you a simulation. When you send us the coordinates a probe will automatically be launched to that destination. We only have five shots at this, for the sake of the World's beef make sure the coordinates you send back are correct.

Good luck,

Agent Jackson
BAI

Space probe API Detail

Probe Navigation API

Method	HTTP request	Description
URIs relative to <code>http://goserver.cloudapp.net:3000</code>		
<code>getdata</code>	<code>GET /api/spaceprobe/getdata/{email}</code>	Downloads the latest tracked data.
<code>submitdata</code>	<code>GET /api/spaceprobe/submitdata/{email}/{x}/{y}</code>	Submit final coordinates and launch probe.

Probe Navigation: `getdata`

Get the last tracked movements for an alien spacecraft.

Request

HTTP request

GET `http://goserver.cloudapp.net:3000/api/spaceprobe/getdata/{email}`

Parameters

Parameter name	Value	Description
Required parameters		
<code>email</code>	<code>string</code>	The email of the user requesting data, must be a valid and active email address.

Request body

Do not supply a request body with this method

Response

If successful, this method returns a `directions` object in the response body.

Probe Navigation: `submitdata`

Submit the estimated final coordinate and launch the probe.

Request

HTTP request

GET

`http://goserver.cloudapp.net:3000/api/spaceprobe/submitdata/{email}/{x}/{y}`

Parameters

Parameter name	Value	Description
Required parameters		
<code>email</code>	<code>string</code>	The email of the user submitting data, must be a valid and active email address.
<code>x</code>	<code>int</code>	The x coordinate of the final position
<code>y</code>	<code>int</code>	The y coordinate of the final position

Request body

Do not supply a request body with this method

Response

If successful, this method returns a `message` object in the response body.

Directions

Directions is a collection of strings that represent the moves made by the alien spacecraft.

Resource representation

A directions object is represented in the API as a JSON data structure as shown below. This is received in the body of a response.

```
{
  "Directions":["FORWARD","FORWARD","RIGHT","FORWARD","FORWARD","FORWARD","FORWARD","RIGHT","FORWARD","FORWARD","LEFT","FORWARD","RIGHT","LEFT","LEFT","FORWARD","FORWARD","FORWARD","LEFT","RIGHT"]
}
```

Message

Message is returned when data is submitted to the submit data API, it represents the response from the server.

Resource representation

A message object is represented in the API as a JSON data structure as shown below. This is received in the body of a response.

```
{"Message":"Message string","StatusCode":500}
```

Property name	Value	Description
Message	string	Human readable message
StatusCode	int	200 = Success, probe correctly reached destination 500 = Error, something went wrong check the message for further details