In the Analysis process I will be analyzing the API’s documentation to:

1. Understand what this API does.
2. Understand the technical requirements and conditions for each module of the API.
3. Understand the functionality of the API and its functional validations.

**Documentation’s link**: <https://restful-booker.herokuapp.com/apidoc/index.html>

**What the API does**

This is a booking API for hotel reservations, it shows the information of the booker using all of the 5 requests: GET, POST, PUT, PATCH, DELETE.

Restful booker is a **C**reate **R**ead **U**pdate **D**elete Web API that comes with authentication features. The API comes pre-loaded with 10 records **and resets itself every 10 minutes back to that default state.**

**Technical requirements and conditions**

**Auth**

**Auth - Create Token**

Creates a new auth token to use for access to the PUT and DELETE /booking

**POST**

https://restful-booker.herokuapp.com/auth

* [Example 1:](https://restful-booker.herokuapp.com/apidoc/index.html#examples-Auth-CreateToken-1_0_0-0)

curl -X POST \

https://restful-booker.herokuapp.com/auth \

-H 'Content-Type: application/json' \

-d '{

"username" : "admin",

"password" : "password123"

}'

**Header**

| **Field** | **Type** | **Description** |
| --- | --- | --- |
| Content-Type | string | Sets the format of payload you are sending  Default value: application/json |

**Request body**

| **Field** | **Type** | **Description** |
| --- | --- | --- |
| username | String | Username for authentication  Default value: admin |
| password | String | Password for authentication  Default value: password123 |

**Success 200**

| **Field** | **Type** | **Description** |
| --- | --- | --- |
| token | String | Token to use in future requests |

* [Response:](https://restful-booker.herokuapp.com/apidoc/index.html#success-examples-Auth-CreateToken-1_0_0-0)

HTTP/1.1 200 OK

{

"token": "abc123"

}

Technical requirements:

T1 – Type of username and password must be String.

T1.2 – Username default value is always “admin”(test to see if it can be changed and if we can add numbers, special characters, leave it blank or have first character blank).

T1.3 – Password seems like a string and number only and it’s bigger than 8 digits (test to see if it can be smaller than 8 digits and if it accepts other types like special characters and blank spaces).

T2 – Type of token must be String.

T3 – Status code upon success is 200 OK.

T4 – Content type is JSON (there must be content type in header so try to test it without the content type).

T5 – Token gives you access to PUT, PATCH, and DELETE and without it you can’t use them.

T6 – This only works with POST call.

T7 – URL is <https://restful-booker.herokuapp.com/auth> (try to add parameters to it and test it to see if it will show different results).

**Booking**

**Booking - GetBookingIds**

Returns the ids of all the bookings that exist within the API. Can take optional query strings to search and return a subset of booking ids.

**GET**

<https://restful-booker.herokuapp.com/booking>

[Example 1 (All IDs):](https://restful-booker.herokuapp.com/apidoc/index.html#examples-Booking-GetBookings-1_0_0-0)

curl -i https://restful-booker.herokuapp.com/booking

[Example 2 (Filter by name):](https://restful-booker.herokuapp.com/apidoc/index.html#examples-Booking-GetBookings-1_0_0-1)

curl -i https://restful-booker.herokuapp.com/booking?firstname=sally&lastname=brown

[Example 3 (Filter by checkin/checkout date):](https://restful-booker.herokuapp.com/apidoc/index.html#examples-Booking-GetBookings-1_0_0-2)

curl -i <https://restful-booker.herokuapp.com/booking?checkin=2014-03-13&checkout=2014-05-21>

**Parameter**

| **Field** | **Type** | **Description** |
| --- | --- | --- |
| first name **optional** | String | Return bookings with a specific firstname |
| Lastname **optional** | String | Return bookings with a specific lastname |
| Checkin **optional** | date | Return bookings that have a checkin date greater than or equal to the set checkin date. Format must be CCYY-MM-DD |
| Checkout **optional** | date | Return bookings that have a checkout date greater than or equal to the set checkout date. Format must be CCYY-MM-DD |

**Success 200**

| **Field** | **Type** | **Description** |
| --- | --- | --- |
| object | object[] | Array of objects that contain unique booking IDs |
| bookingid | number | ID of a specific booking that matches search criteria |

* [Response:](https://restful-booker.herokuapp.com/apidoc/index.html#success-examples-Booking-GetBookings-1_0_0-0)

HTTP/1.1 200 OK

[

{

"bookingid": 1

},

{

"bookingid": 2

},

{

"bookingid": 3

},

{

"bookingid": 4

}

]

Technical requirements:

cccccc

T16 – Booking ids must be numeric.

**Booking - GetBooking**

Returns a specific booking based upon the booking id provided

**GET**

https://restful-booker.herokuapp.com/booking/:id

* [Example 1 (Get booking):](https://restful-booker.herokuapp.com/apidoc/index.html#examples-Booking-GetBooking-1_0_0-0)

curl -i https://restful-booker.herokuapp.com/booking/1

**Header**

| **Field** | **Type** | **Description** |
| --- | --- | --- |
| Accept | string | Sets what format the response body is returned in. Can be application/json or application/xml  Default value: application/json |

| **Field** | **Type** | **Description** |
| --- | --- | --- |
| id | String | The id of the booking you would like to retrieve |

**Url Parameter**

**Success 200**

| **Field** | **Type** | **Description** |
| --- | --- | --- |
| firstname | String | Firstname for the guest who made the booking |
| lastname | String | Lastname for the guest who made the booking |
| totalprice | Number | The total price for the booking |
| depositpaid | Boolean | Whether the deposit has been paid or not |
| bookingdates | Object | Sub-object that contains the checkin and checkout dates |
| checkin | Date | Date the guest is checking in |
| checkout | Date | Date the guest is checking out |
| additionalneeds | String | Any other needs the guest has |

[JSON Response:](https://restful-booker.herokuapp.com/apidoc/index.html#success-examples-Booking-GetBooking-1_0_0-0)

HTTP/1.1 200 OK

{

"firstname": "Sally",

"lastname": "Brown",

"totalprice": 111,

"depositpaid": true,

"bookingdates": {

"checkin": "2013-02-23",

"checkout": "2014-10-23"

},

"additionalneeds": "Breakfast"

}

[XML Response:](https://restful-booker.herokuapp.com/apidoc/index.html#success-examples-Booking-GetBooking-1_0_0-1)

HTTP/1.1 200 OK

<booking>

<firstname>Sally</firstname>

<lastname>Brown</lastname>

<totalprice>111</totalprice>

<depositpaid>true</depositpaid>

<bookingdates>

<checkin>2013-02-23</checkin>

<checkout>2014-10-23</checkout>

</bookingdates>

<additionalneeds>Breakfast</additionalneeds>

</booking>

[URL Response:](https://restful-booker.herokuapp.com/apidoc/index.html#success-examples-Booking-GetBooking-1_0_0-2)

firstname=Jim&lastname=Brown&totalprice=111&depositpaid=true&bookingdates%5Bcheckin%5D=2018-01-01&bookingdates%5Bcheckout%5D=2019-01-01

Technical requirements:

T17 – Header must have “Accept” of type JSON default value application/json.

T18 – Parameter can have an id number which will show the booking information of the specific id number.

T19 – Upon successful response the status code must be 200.

T20 – Upon successful response the returned data must contain firstname (String), lastname (String), totalprice (Numeric), depositpaid (Boolean), bookingdates (Object), checkin (String date), checkout (String date), additional needs (String).

**Booking - CreateBooking**

Creates a new booking in the API

**POST**

<https://restful-booker.herokuapp.com/booking>

[JSON example usage:](https://restful-booker.herokuapp.com/apidoc/index.html#examples-Booking-CreateBooking-1_0_0-0)

curl -X POST \

https://restful-booker.herokuapp.com/booking \

-H 'Content-Type: application/json' \

-d '{

"firstname" : "Jim",

"lastname" : "Brown",

"totalprice" : 111,

"depositpaid" : true,

"bookingdates" : {

"checkin" : "2018-01-01",

"checkout" : "2019-01-01"

},

"additionalneeds" : "Breakfast"

}'

[XML example usage:](https://restful-booker.herokuapp.com/apidoc/index.html#examples-Booking-CreateBooking-1_0_0-1)

curl -X POST \

https://restful-booker.herokuapp.com/booking \

-H 'Content-Type: text/xml' \

-d '<booking>

<firstname>Jim</firstname>

<lastname>Brown</lastname>

<totalprice>111</totalprice>

<depositpaid>true</depositpaid>

<bookingdates>

<checkin>2018-01-01</checkin>

<checkout>2019-01-01</checkout>

</bookingdates>

<additionalneeds>Breakfast</additionalneeds>

</booking>'

[URLencoded example usage:](https://restful-booker.herokuapp.com/apidoc/index.html#examples-Booking-CreateBooking-1_0_0-2)

curl -X POST \

https://restful-booker.herokuapp.com/booking \

-H 'Content-Type: application/x-www-form-urlencoded' \

-d 'firstname=Jim&lastname=Brown&totalprice=111&depositpaid=true&bookingdates%5Bcheckin%5D=2018-01-01&bookingdates%5Bcheckout%5D=2018-01-02'

**Header**

| **Field** | **Type** | **Description** |
| --- | --- | --- |
| Content-Type | string | Sets the format of payload you are sending.  Can be application/json or text/xml  Default value: application/json |
| Accept | string | Sets what format the response body is returned in.  Can be application/json or application/xml  Default value: application/json |

| **Field** | **Type** | **Description** |
| --- | --- | --- |
| firstname | String | Firstname for the guest who made the booking |
| lastname | String | Lastname for the guest who made the booking |
| totalprice | Number | The total price for the booking |
| depositpaid | Boolean | Whether the deposit has been paid or not |
| checkin | Date | Date the guest is checking in |
| checkout | Date | Date the guest is checking out |
| additionalneeds | String | Any other needs the guest has |

**Request body**

**Success 200**

| **Field** | **Type** | **Description** |
| --- | --- | --- |
| bookingid | Number | ID for newly created booking |
| booking | Object | Object that contains |
| firstname | String | Firstname for the guest who made the booking |
| lastname | String | Lastname for the guest who made the booking |
| totalprice | Number | The total price for the booking |
| depositpaid | Boolean | Whether the deposit has been paid or not |
| bookingdates | Object | Sub-object that contains the checkin and  checkout dates |
| checkin | Date | Date the guest is checking in |
| checkout | Date | Date the guest is checking out |
| additionalneeds | String | Any other needs the guest has |

[JSON Response:](https://restful-booker.herokuapp.com/apidoc/index.html#success-examples-Booking-CreateBooking-1_0_0-0)

HTTP/1.1 200 OK

{

"bookingid": 1,

"booking": {

"firstname": "Jim",

"lastname": "Brown",

"totalprice": 111,

"depositpaid": true,

"bookingdates": {

"checkin": "2018-01-01",

"checkout": "2019-01-01"

},

"additionalneeds": "Breakfast"

}

}

Technical Requirements

T29 – Upon successful response the status code must be 200.

T30 – Upon successful response the returned data must contain bookingid (Numeric), booking (Object), firstname (String), lastname (String), totalprice (Numeric), depositpaid (Boolean), bookingdates (Object), checkin (String date), checkout (String date), additional needs (String).

T31 – First and Last name must be String.

T32 – Total price must be numeric.

T33 – Deposit paid must be Boolean.

T34 – Booking dates must have 2 values, checkin and checkout.

T35 – Checkin and checkout must be String.

T36 – Checkin and checkout must be in the format CCYY-MM-DD ex: 2014-03-13.

T37 – Additional need must be String.

**Booking - UpdateBooking**

Updates a current booking

**PUT**

https://restful-booker.herokuapp.com/booking/:id

[JSON example usage:](https://restful-booker.herokuapp.com/apidoc/index.html#examples-Booking-UpdateBooking-1_0_0-0)

curl -X PUT \

https://restful-booker.herokuapp.com/booking/1 \

-H 'Content-Type: application/json' \

-H 'Accept: application/json' \

-H 'Cookie: token=abc123' \

-d '{

"firstname" : "James",

"lastname" : "Brown",

"totalprice" : 111,

"depositpaid" : true,

"bookingdates" : {

"checkin" : "2018-01-01",

"checkout" : "2019-01-01"

},

"additionalneeds" : "Breakfast"

}'

**Header**

| **Field** | **Type** | **Description** |
| --- | --- | --- |
| Content-Type | string | Sets the format of payload you are sending. Can be application/json  or text/xml  Default value: application/json |
| Accept | string | Sets what format the response body is returned in.  Can be application/json or application/xml  Default value: application/json |
| Cookie **optional** | string | Sets an authorization token to access the PUT endpoint,  can be used as an alternative to the Authorization  Default value: token=<token\_value> |
| Authorization **optional** | string | Basic authorization header to access the PUT endpoint,  can be used as an alternative to the Cookie header  Default value: Basic YWRtaW46cGFzc3dvcmQxMjM= |

**Url Parameter**

| **Field** | **Type** | **Description** |
| --- | --- | --- |
| id | Number | ID for the booking you want to update |

**Request body**

| **Field** | **Type** | **Description** |
| --- | --- | --- |
| firstname | String | Firstname for the guest who made the booking |
| lastname | String | Lastname for the guest who made the booking |
| totalprice | Number | The total price for the booking |
| depositpaid | Boolean | Whether the deposit has been paid or not |
| checkin | Date | Date the guest is checking in |
| checkout | Date | Date the guest is checking out |
| additionalneeds | String | Any other needs the guest has |

**Success 200**

| **Field** | **Type** | **Description** |
| --- | --- | --- |
| firstname | String | Firstname for the guest who made the booking |
| lastname | String | Lastname for the guest who made the booking |
| totalprice | Number | The total price for the booking |
| depositpaid | Boolean | Whether the deposit has been paid or not |
| bookingdates | Object | Sub-object that contains the checkin and checkout dates |
| checkin | Date | Date the guest is checking in |
| checkout | Date | Date the guest is checking out |
| additionalneeds | String | Any other needs the guest has |

[JSON Response:](https://restful-booker.herokuapp.com/apidoc/index.html#success-examples-Booking-UpdateBooking-1_0_0-0)

HTTP/1.1 200 OK

{

"firstname" : "James",

"lastname" : "Brown",

"totalprice" : 111,

"depositpaid" : true,

"bookingdates" : {

"checkin" : "2018-01-01",

"checkout" : "2019-01-01"

},

"additionalneeds" : "Breakfast"

}

Technical Requirements

T38 – Content type and accept are both of type JSON.

T39 – There must be authorization token to access PUT endpoint.

T40 – Authorization can be in form of Cookie (token value) or Authorization (Default value: Basic YWRtaW46cGFzc3dvcmQxMjM=) in the header.

T41 – Upon success update status code must be 200 OK.

T42 – URL must have parameter of id number that will be updated.

T43 – All the request body must be written since this is a PUT call but not all of it has to be updated.

T44 – Upon successful response the returned data must contain firstname (String), lastname (String), totalprice (Numeric), depositpaid (Boolean), bookingdates (Object), checkin (String date), checkout (String date), additional needs (String).

T45 – First and Last name must be String.

T46 – Total price must be numeric.

T47 – Deposit paid must be Boolean.

T48 – Booking dates must have 2 values, checkin and checkout.

T49 – Checkin and checkout must be String.

T50 – Checkin and checkout must be in the format CCYY-MM-DD ex: 2014-03-13.

T51 – Additional need must be String.

**Booking - PartialUpdateBooking**

Updates a current booking with a partial payload

**PATCH**

https://restful-booker.herokuapp.com/booking/:id

[JSON example usage:](https://restful-booker.herokuapp.com/apidoc/index.html#examples-Booking-UpdateBooking-1_0_0-0)

curl -X PUT \

https://restful-booker.herokuapp.com/booking/1 \

-H 'Content-Type: application/json' \

-H 'Accept: application/json' \

-H 'Cookie: token=abc123' \

-d '{

"firstname" : "James",

"lastname" : "Brown",

"totalprice" : 111,

"depositpaid" : true,

"bookingdates" : {

"checkin" : "2018-01-01",

"checkout" : "2019-01-01"

},

"additionalneeds" : "Breakfast"

}'

**Header**

| **Field** | **Type** | **Description** |
| --- | --- | --- |
| Content-Type | string | Sets the format of payload you are sending. Can be application/json  or text/xml  Default value: application/json |
| Accept | string | Sets what format the response body is returned in.  Can be application/json or application/xml  Default value: application/json |
| Cookie **optional** | string | Sets an authorization token to access the PUT endpoint,  can be used as an alternative to the Authorization  Default value: token=<token\_value> |
| Authorization **optional** | string | Basic authorization header to access the PUT endpoint,  can be used as an alternative to the Cookie header  Default value: Basic YWRtaW46cGFzc3dvcmQxMjM= |

**Url Parameter**

| **Field** | **Type** | **Description** |
| --- | --- | --- |
| id | Number | ID for the booking you want to update |

**Request body**

| **Field** | **Type** | **Description** |
| --- | --- | --- |
| firstname | String | Firstname for the guest who made the booking |
| lastname | String | Lastname for the guest who made the booking |
| totalprice | Number | The total price for the booking |
| depositpaid | Boolean | Whether the deposit has been paid or not |
| checkin | Date | Date the guest is checking in |
| checkout | Date | Date the guest is checking out |
| additionalneeds | String | Any other needs the guest has |

**Success 200**

| **Field** | **Type** | **Description** |
| --- | --- | --- |
| firstname | String | Firstname for the guest who made the booking |
| lastname | String | Lastname for the guest who made the booking |
| totalprice | Number | The total price for the booking |
| depositpaid | Boolean | Whether the deposit has been paid or not |
| bookingdates | Object | Sub-object that contains the checkin and checkout dates |
| checkin | Date | Date the guest is checking in |
| checkout | Date | Date the guest is checking out |
| additionalneeds | String | Any other needs the guest has |

[JSON Response:](https://restful-booker.herokuapp.com/apidoc/index.html#success-examples-Booking-UpdateBooking-1_0_0-0)

HTTP/1.1 200 OK

{

"firstname" : "James",

"lastname" : "Brown",

"totalprice" : 111,

"depositpaid" : true,

"bookingdates" : {

"checkin" : "2018-01-01",

"checkout" : "2019-01-01"

},

"additionalneeds" : "Breakfast"

}

Technical Requirements

T52 – Content type and accept are both of type JSON.

T53 – There must be authorization token to access PATCH endpoint.

T54 – Authorization can be in form of Cookie (token value) or Authorization (Default value: Basic YWRtaW46cGFzc3dvcmQxMjM=) in the header.

T55 – Upon success update status code must be 200 OK.

T56 – URL must have parameter of id number that will be updated.

T57 – Request body doesn’t need to be written fully can just be the part that needs to be updated since this is a PATCH call.

T58 – Upon successful response the returned data must contain firstname (String), lastname (String), totalprice (Numeric), depositpaid (Boolean), bookingdates (Object), checkin (String date), checkout (String date), additional needs (String).

T59 – First and Last name must be String.

T60 – Total price must be numeric.

T61 – Deposit paid must be Boolean.

T62 – Booking dates must have 2 values, checkin and checkout.

T63 – Checkin and checkout must be String.

T64 – Checkin and checkout must be in the format CCYY-MM-DD ex: 2014-03-13.

T65 – Additional need must be String.

**Booking - DeleteBooking**

Returns the ids of all the bookings that exist within the API. Can take optional query strings to search and return a subset of booking ids.

**DELETE**

https://restful-booker.herokuapp.com/booking/1

[Example 1 (Cookie):](https://restful-booker.herokuapp.com/apidoc/index.html#examples-Booking-DeleteBooking-1_0_0-0)

curl -X DELETE \

https://restful-booker.herokuapp.com/booking/1 \

-H 'Content-Type: application/json' \

-H 'Cookie: token=abc123'

[Example 2 (Basic auth):](https://restful-booker.herokuapp.com/apidoc/index.html#examples-Booking-DeleteBooking-1_0_0-1)

curl -X DELETE \

https://restful-booker.herokuapp.com/booking/1 \

-H 'Content-Type: application/json' \

-H 'Authorization: Basic YWRtaW46cGFzc3dvcmQxMjM='

**Header**

| **Field** | **Type** | **Description** |
| --- | --- | --- |
| Cookie **optional** | string | Sets an authorization token to access the DELETE endpoint,  can be used as an alternative to the Authorization  Default value: token=<token\_value> |
| Authorization **optional** | string | Basic authorization header to access the DELETE endpoint,  can be used as an alternative to the Cookie header  Default value: Basic YWRtaW46cGFzc3dvcmQxMjM= |

**Url Parameter**

| **Field** | **Type** | **Description** |
| --- | --- | --- |
| id | Number | ID for the booking you want to update |

| **Field** | **Type** | **Description** |
| --- | --- | --- |
| OK | String | Default HTTP 201 response |

**Success 200**

[Response:](https://restful-booker.herokuapp.com/apidoc/index.html#success-examples-Booking-DeleteBooking-1_0_0-0)

HTTP/1.1 201 Created

Technical Requirements

T66 – There must be authorization token to access DELETE endpoint.

T67 – URL must have parameter of id number that will be DELETED.

T68 – Upon success update status code must be 201 Created.

**Ping**

**Ping - HealthCheck**

A simple health check endpoint to confirm whether the API is up and running.

**GET**

https://restful-booker.herokuapp.com/ping

[Ping server:](https://restful-booker.herokuapp.com/apidoc/index.html#examples-Ping-Ping-1_0_0-0)

curl -i https://restful-booker.herokuapp.com/ping

**Success 200**

| **Field** | **Type** | **Description** |
| --- | --- | --- |
| OK | String | Default HTTP 201 response |

* [Response:](https://restful-booker.herokuapp.com/apidoc/index.html#success-examples-Ping-Ping-1_0_0-0)

HTTP/1.1 201 Created