Final Project

CS 493: Cloud Application Development

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API Link:

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# Change log

|  |  |  |
| --- | --- | --- |
| **Version** | **Change** | **Date** |
| 1.0 | Initial version. | April 11 2021 |
| 1.1 | Edited for Final Project | June 01 2021 |

# Datastore Data Model

The Datastore has users, milestones and children attached to it.

Users has the following headers

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Id | Name | Picture | User\_id | Children | Self |

Milestones have the following headers

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Id | Activity | Age | Category | Children\_assigned | Milestone | Self |

Children have the following headers

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Id | First\_name | Gender | Birthday | User\_id | Milestones\_id\_assigned | Self |

As can be seen via color coordination, milestone IDs connect with Carriers and Child IDs connect with Children field in milestones.

# Create a Milestone

Allows you to create a new milestone.

|  |
| --- |
| POST /milestones |

## Request

### Path Parameters

None

### Request Body

Required

### Request Body Format

JSON

### Request JSON Attributes

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Type** | **Description** | **Required?** |
| activity | String | The activity used to support the milestone listed. Must be unique to this milestone. | Yes |
| age | String | Age the milestone should be considered at. | Yes |
| category | String | Milestone category. | Yes |
| milestone | String | The milestone which the activity supports. There can be duplicate milestones. | Yes |

### Request Body Example

|  |
| --- |
| {  "activity": "Place baby tummy down on a blanket and move the blanket slowly around the room.",  "age": "0-1 month",  "category": “Physical”  “milestone”: “Moves head from side to side while lying on stomach”  } |

## Response

### Response Body Format

JSON

### Response Statuses

|  |  |  |
| --- | --- | --- |
| **Outcome** | **Status Code** | **Notes** |
| Success | 201 Created |  |
| Failure | 400 Bad Request | If the request is missing any of the 4 required attributes, the milestone must not be created, and 400 status code must be returned. |
| Failure | 406 Not Acceptable | API only supports JSON request and return objects. |

### Response Examples

#### Success

|  |
| --- |
| Status: 201 Created  { "id": 1234,  "activity": "Example Activity",  "age": "2 years",  "category": “emotional”,  "children\_assigned": 3,  “milestone”: “Example milestone”,  “self”: “https://appspot.com/milestones/1234”  } |

#### Failure

|  |
| --- |
| Status: 400 Bad Request  {  "Error": "The request object is missing at least one of the required attributes."  } |

#### Failure

|  |
| --- |
| Status: 406 Not Acceptable  {  "Error": "This API only supports JSON request and return objects."  } |

# View a Milestone

Allows you to get an existing milestone

|  |
| --- |
| GET /milestones/:milestone\_id |

## Request

## Path Parameters

|  |  |  |
| --- | --- | --- |
| **Name** | **Type** | **Description** |
| milestone\_id | String | ID of the milestone |

### Request Body

None

## Response

### Response Body Format

JSON

### Response Statuses

|  |  |  |
| --- | --- | --- |
| **Outcome** | **Status Code** | **Notes** |
| Success | 200 OK |  |
| Failure | 404 Not Found | No milestone with this milestone\_id exists |
| Failure | 406 Not Acceptable | API only supports JSON request and return objects. |

### Response Examples

#### Success

|  |
| --- |
| Status: 200 OK  { "id": 1234,  "activity": "Example Activity",  "age": "2 years",  "category": “emotional”,  "children\_assigned": 3,  “milestone”: “Example milestone”,  “self”: “https://appspot.com/milestones/1234”  } |

#### Failure

|  |
| --- |
| Status: 404 Not Found  {  "Error": "No milestone with this milestone\_id exists."  } |

#### Failure

|  |
| --- |
| Status: 406 Not Acceptable  {  "Error": "This API only supports JSON request and return objects."  } |

# View all Milestones

List all the milestones.

|  |
| --- |
| GET /milestones |

## Request

### Path Parameters

None

### Request Body

None

## Response

### Response Body Format

JSON

### Response Statuses

|  |  |  |
| --- | --- | --- |
| **Outcome** | **Status Code** | **Notes** |
| Success | 200 OK |  |
| Failure | 406 Not Acceptable | API only supports JSON request and return objects. |

### Response Examples

#### Success

|  |
| --- |
| Status: 200 OK  [  “next”: “https://appspot.com/milestones?offset=2”,  “milestones”: [  { "id": 1234,  "activity": "Example Activity",  "age": "2 years",  "category": “emotional”,  "children\_assigned": 3,  “milestone”: “Example milestone”,  “self”: “https://appspot.com/milestones/1234”  },  { "id": 1234,  "activity": "Example Activity",  "age": "2 years",  "category": “emotional”,  "children\_assigned": 3,  “milestone”: “Example milestone”,  “self”: “https://appspot.com/milestones/1234”  },  { "id": 1234,  "activity": "Example Activity",  "age": "2 years",  "category": “emotional”,  "children\_assigned": 3,  “milestone”: “Example milestone”,  “self”: “https://appspot.com/milestones/1234”  },  { "id": 1234,  "activity": "Example Activity",  "age": "2 years",  "category": “emotional”,  "children\_assigned": 3,  “milestone”: “Example milestone”,  “self”: “https://appspot.com/milestones/1234”  },  { "id": 1234,  "activity": "Example Activity",  "age": "2 years",  "category": “emotional”,  "children\_assigned": 3,  “milestone”: “Example milestone”,  “self”: “https://appspot.com/milestones/1234”  }]] |

#### Failure

|  |
| --- |
| Status: 406 Not Acceptable  {  "Error": "This API only supports JSON request and return objects."  } |

# Delete a Milestone

Allows you to delete a milestone. Note that if the milestone is currently holding a child, deleting the milestone unchildren any children that were assigned to it.

|  |
| --- |
| DELETE /milestones/:milestone\_id |

## Request

### Path Parameters

|  |  |  |
| --- | --- | --- |
| **Name** | **Type** | **Description** |
| milestone\_id | String | ID of the milestone |

### Request Body

None

## Response

No body

### Response Body Format

Success: No body

Failure: JSON

### Response Statuses

|  |  |  |
| --- | --- | --- |
| **Outcome** | **Status Code** | **Notes** |
| Success | 204 No Content |  |
| Failure | 404 Not Found | No milestone with this milestone\_id exists |
| Failure | 406 Not Acceptable | API only supports JSON request and return objects. |

### Response Examples

#### Success

|  |
| --- |
| Status: 204 No Content |

#### Failure

|  |
| --- |
| Status: 404 Not Found  {  "Error": "No milestone with this milestone\_id exists."  } |

#### Failure

|  |
| --- |
| Status: 406 Not Acceptable  {  "Error": "This API only supports JSON request and return objects."  } |

# Create a Child

Allows you to create a new child.

|  |
| --- |
| POST /children |

## Request

### Path Parameters

None

### Request Body

Required

### Request Body Format

JSON

### Request JSON Attributes

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Type** | **Description** | **Required?** |
| first\_name | String | The first name of the child. | Yes |
| gender | String | Gender of the child. | Yes |
| birthday | Date | Birthdate of the child (may be just month and year). | Yes |

### Request Body Example

|  |
| --- |
| {  “first\_name”: “Katie”,  “gender”: “female”,  “birthday”: “07/05/2012”  } |

## Response

### Response Body Format

JSON

### Response Statuses

|  |  |  |
| --- | --- | --- |
| **Outcome** | **Status Code** | **Notes** |
| Success | 201 Created |  |
| Failure | 400 Bad Request | If the request is missing the volume or content fields, the child must not be created, and 400 status code must be returned. |
| Failure | 401 Unauthorized | If the request is missing an authorization header, or the authorization sent is invalid or expired. |
| Failure | 406 Not Acceptable | API only supports JSON request and return objects. |

### Response Examples

#### Success

|  |
| --- |
| Status: 200 OK  {  “id”: “987897”,  “first\_name”: “Katie”,  “gender”: “female”,  “birthday”: “07/05/2012”,  “user\_id”: “auth2020”,  “milestones\_assigned”: [],  “self”: “https:appspot.com/children/987897”  } |

#### Failure

|  |
| --- |
| Status: 400 Bad Request  {  "Error": "The request object is missing required information for the child.”  } |

#### Failure

|  |
| --- |
| Status: 401 Unauthorized  {  "Error": "Token is expired."  } |

#### Failure

|  |
| --- |
| Status: 406 Not Acceptable  {  "Error": "This API only supports JSON request and return objects."  } |

# View a Child

Allows you to get an existing child.

|  |
| --- |
| GET /children/:child\_id |

## Request

### Path Parameters

|  |  |  |
| --- | --- | --- |
| **Name** | **Type** | **Description** |
| child\_id | String | ID of the child |

### Request Body

None

## Response

### Response Body Format

JSON

### Response Statuses

|  |  |  |
| --- | --- | --- |
| **Outcome** | **Status Code** | **Notes** |
| Success | 200 OK |  |
| Failure | 401 Unauthorized | If the request is missing an authorization header, or the authorization sent is invalid or expired. |
| Failure | 404 Not Found | No child with this child\_id exists |
| Failure | 406 Not Acceptable | API only supports JSON request and return objects. |

### Response Examples

#### Success

|  |
| --- |
| Status: 200 OK  {  “id”: “987897”,  “first\_name”: “Katie”,  “gender”: “female”,  “birthday”: “07/05/2012”,  “user\_id”: “auth2020”,  “milestones\_assigned”: [],  “self”: “https:appspot.com/children/987897”  } |

#### Failure

|  |
| --- |
| Status: 401 Unauthorized  {  "Error": "Token is expired."  } |

#### Failure

|  |
| --- |
| Status: 404 Not Found  {  "Error": "No child with this child\_id exists."  } |

#### Failure

|  |
| --- |
| Status: 406 Not Acceptable  {  "Error": "This API only supports JSON request and return objects."  } |

# View all Children

List all the children.

|  |
| --- |
| GET /children |

## Request

### Path Parameters

None

### Request Body

None

## Response

### Response Body Format

JSON

### Response Statuses

|  |  |  |
| --- | --- | --- |
| **Outcome** | **Status Code** | **Notes** |
| Success | 200 OK | Returns only children which belong to the authorized user. If no authentication is sent, an error is returned. |
| Failure | 401 Unauthorized | If the request is missing an authorization header, or the authorization sent is invalid or expired. |
| Failure | 406 Not Acceptable | API only supports JSON request and return objects. |

### Response Examples

#### Success

|  |
| --- |
| Status: 200 OK  [  “children”: [  {  “id”: “987897”,  “first\_name”: “Katie”,  “gender”: “female”,  “birthday”: “07/05/2012”,  “user\_id”: “auth2020”,  “milestones\_assigned”: [],  “self”: “https:appspot.com/children/987897”  },  {  “id”: “987897”,  “first\_name”: “Richard”,  “gender”: “male”,  “birthday”: “07/11/2013”,  “user\_id”: “auth202324”,  “milestones\_assigned”: [  “id”: “50561”,  “self”: “https:appspot.com/milestones/1560”  ],  “self”: “https:appspot.com/children/987897”  ]  } |

#### Failure

|  |
| --- |
| Status: 401 Unauthorized  {  "Error": "Token is expired."  } |

#### Failure

|  |
| --- |
| Status: 406 Not Acceptable  {  "Error": "This API only supports JSON request and return objects."  } |

# Delete a Child

Allows you to delete a child. Deleting a child should update any milestone children\_assigned count.

|  |
| --- |
| DELETE /children/:child\_id |

## Request

### Path Parameters

|  |  |  |
| --- | --- | --- |
| **Name** | **Type** | **Description** |
| child\_id | String | ID of the child |

### Request Body

None

## Response

No body

### Response Body Format

Success: No body

Failure: JSON

### Response Statuses

|  |  |  |
| --- | --- | --- |
| **Outcome** | **Status Code** | **Notes** |
| Success | 204 No Content |  |
| Failure | 401 Unauthorized | If the request is missing an authorization header, or the authorization sent is invalid or expired. |
| Failure | 404 Not Found | No child with this child\_id exists |
| Failure | 406 Not Acceptable | API only supports JSON request and return objects. |

### Response Examples

#### Success

|  |
| --- |
| Status: 204 No Content |

#### Failure

|  |
| --- |
| Status: 401 Unauthorized  {  "Error": "Token is expired."  } |

#### Failure

|  |
| --- |
| Status: 404 Not Found  {  "Error": "No child with this child\_id exists."  } |

#### Failure

|  |
| --- |
| Status: 406 Not Acceptable  {  "Error": "This API only supports JSON request and return objects."} |

# Assign a milestone to a child

A child is added to a milestone to be carried.

|  |
| --- |
| PUT /children/<child\_id>/milestones/<milestone\_id> |

## Request

### Path Parameters

|  |  |  |
| --- | --- | --- |
| **Name** | **Type** | **Description** |
| child\_id | String | ID of the child |
| milestone\_id | String | ID of the milestone |

### Request Body

None

## Response

No body

### Response Body Format

Success: No body

Failure: JSON

### Response Statuses

|  |  |  |
| --- | --- | --- |
| **Outcome** | **Status Code** | **Notes** |
| Success | 204 No Content | Succeeds only if a milestone exists with this milestone\_id, a child exists with this child\_id and the child carrier field is empty. |
| Failure | 401 Unauthorized | If the request is missing an authorization header, or the authorization sent is invalid or expired. |
| Failure | 403 Forbidden | A child already has this milestone assigned. |
| Failure | 404 Not Found | No milestone with this milestone\_id exists, and/or no child with this child\_id exits. |
| Failure | 406 Not Acceptable | API only supports JSON request and return objects. |

### Response Examples

#### Success

|  |
| --- |
| Status: 204 No Content |

#### Failure

|  |
| --- |
| Status: 401 Unauthorized  {  "Error": "Token is expired."  } |

#### Failure

|  |
| --- |
| Status: 403 Forbidden  {  "Error": "A child already has this milestone assigned."  } |

|  |
| --- |
| Status: 404 Not Found  {  "Error": "The specified milestone and/or child does not exist."  } |

#### Failure

|  |
| --- |
| Status: 406 Not Acceptable  {  "Error": "This API only supports JSON request and return objects."  } |

# Child is removed from a milestone

Child has been unpacked from a milestone. The child has no carrier.

|  |
| --- |
| DELETE /milestones/{{milestone\_id}}/children/{{child\_id}} |

## Request

### Path Parameters

|  |  |  |
| --- | --- | --- |
| **Name** | **Type** | **Description** |
| child\_id | String | ID of the child |
| milestone\_id | String | ID of the milestone |

### Request Body

None

## Response

No body

### Response Body Format

Success: No body

Failure: JSON

### Response Statuses

|  |  |  |
| --- | --- | --- |
| **Outcome** | **Status Code** | **Notes** |
| Success | 204 No Content | Succeeds only if a milestone exists with this milestone\_id, a child exists with this child\_id and this child is carried by this milestone. |
| Failure | 401 Unauthorized | If the request is missing an authorization header, or the authorization sent is invalid or expired. |
| Failure | 404 Not Found | No milestone with this milestone\_id is assigned to the child with this child\_id. |
| Failure | 406 Not Acceptable | API only supports JSON request and return objects. |

### Response Examples

#### Success

|  |
| --- |
| Status: 204 No Content |

#### Failure

|  |
| --- |
| Status: 401 Unauthorized  {  "Error": "Token is expired."  } |

#### Failure

|  |
| --- |
| Status: 404 Not Found  {  "Error": "No milestone with this milestone\_id is assigned to the child with this child\_id."  } |

#### Failure

|  |
| --- |
| Status: 406 Not Acceptable  {  "Error": "This API only supports JSON request and return objects."  } |

# View all Milestones assigned to a Child

Allows you to get a list of children on a specific milestone.

|  |
| --- |
| GET /children/:child\_id/milestones |

## Request

## Path Parameters

|  |  |  |
| --- | --- | --- |
| **Name** | **Type** | **Description** |
| child\_id | String | ID of the child |

### Request Body

None

## Response

### Response Body Format

JSON

### Response Statuses

|  |  |  |
| --- | --- | --- |
| **Outcome** | **Status Code** | **Notes** |
| Success | 200 OK |  |
| Failure | 401 Unauthorized | If the request is missing an authorization header, or the authorization sent is invalid or expired. |
| Failure | 404 Not Found | No child with this child\_id exists |
| Failure | 406 Not Acceptable | API only supports JSON request and return objects. |

### Response Examples

#### Success

|  |
| --- |
| Status: 200 OK  [{ "id": 1234,  "activity": "Example Activity",  "age": "2 years",  "category": “emotional”,  "children\_assigned": 3,  “milestone”: “Example milestone”,  “self”: “https://appspot.com/milestones/1234”  },  { "id": 1234,  "activity": "Example Activity",  "age": "2 years",  "category": “emotional”,  "children\_assigned": 3,  “milestone”: “Example milestone”,  “self”: “https://appspot.com/milestones/1234”  },  { "id": 1234,  "activity": "Example Activity",  "age": "2 years",  "category": “emotional”,  "children\_assigned": 3,  “milestone”: “Example milestone”,  “self”: “https://appspot.com/milestones/1234”  },  { "id": 1234,  "activity": "Example Activity",  "age": "2 years",  "category": “emotional”,  "children\_assigned": 3,  “milestone”: “Example milestone”,  “self”: “https://appspot.com/milestones/1234”  },  { "id": 1234,  "activity": "Example Activity",  "age": "2 years",  "category": “emotional”,  "children\_assigned": 3,  “milestone”: “Example milestone”,  “self”: “https://appspot.com/milestones/1234”  }] |

#### Failure

|  |
| --- |
| Status: 404 Not Found  {  "Error": "No child with this child\_id exists."  } |

#### Failure

|  |
| --- |
| Status: 406 Not Acceptable  {  "Error": "This API only supports JSON request and return objects."  } |