Note Server User Manual

Interaction with the server happens through a REST API. Users and Notes are grouped into "repositories", where a particular user/note is a resource within their repository. For example, in this URL:

```
http://localhost:9999/user/123
```

the path component (`/user/123`) indicates that the resource is in the "Users" repository with ID 123.

The following sections describe the interaction with these repositories via HTTP. All data sent as request and response bodies are in the JSON format.

1   JSON Representations

1.1   User object sent to server

```
{
  "name" : "ian",
  "password" : "988881adc9fc3655077dc2d4d757d480b5ea0e11",
  "email" : "ian.clement@johnabbott.qc.ca"
}
```

1.2   User object received from server

```
{
  "name" : "ian",
  "password" : "988881adc9fc3655077dc2d4d757d480b5ea0e11",
  "email" : "ian.clement@johnabbott.qc.ca",
  "_links" : {
    "self" : {
      "href" : "http://localhost:9999/user/1"
    },
    "user" : {
      "href" : "http://localhost:9999/user/1"
    },
    "created" : {
      "href" : "http://localhost:9999/user/1/created"
    }
  }
}
```

1.3 Note object sent to server

```json
{
  "created" : "2016-09-10T04:23:34.000+0000",
  "reminder" : "2016-10-12T20:32:54.000+0000",
  "title" : "Lorem ipsum dolor",
  "body" : "Lorem ipsum dolor sit amet, vel ei graece primis ullamcorper, unum denique an nam. Eu
  "category" : -737419
}
```

1.4 Note object received from server

```json
{
  "created" : "2016-09-10T04:23:34.000+0000",
  "reminder" : "2016-10-12T20:32:54.000+0000",
  "title" : "Lorem ipsum dolor",
  "body" : "Lorem ipsum dolor sit amet, vel ei graece primis ullamcorper, unum denique an nam. Eu
  "category" : -737419,
  "_links" : {
    "self" : {
      "href" : "http://localhost:9999/note/1"
    },
    "note" : {
      "href" : "http://localhost:9999/note/1"
    },
    "createdBy" : {
      "href" : "http://localhost:9999/note/1/createdBy"
    }
  }
}
```

1.5 User list object received from server

```json
{
  "_embedded" : {
    "user" : [ {
      "name" : "ian",
      "password" : "988881adc9fc3655077dc2d4d757d480b5ea0e11",
      "email" : "ian.clement@johnabbott.qc.ca",
      "_links" : {
        "self" : {
          "href" : "http://localhost:9999/user/1"
        },
        "user" : {
```

```json
            "href" : "http://localhost:9999/user/1"
          },
          "created" : {
            "href" : "http://localhost:9999/user/1/created"
          }
        }
      }, {
        "name" : "bar",
        "password" : "12345",
        "email" : null,
        "_links" : {
          "self" : {
            "href" : "http://localhost:9999/user/2"
          },
          "user" : {
            "href" : "http://localhost:9999/user/2"
          },
          "created" : {
            "href" : "http://localhost:9999/user/2/created"
          }
        }
      } ]
    },
    "_links" : {
      "self" : {
        "href" : "http://localhost:9999/user"
      },
      "profile" : {
        "href" : "http://localhost:9999/profile/user"
      }
    }
  }
}
```

1.6 Note list received from server

```json
{
  "_embedded" : {
    "note" : [ {
      "created" : "2016-09-10T04:23:34.000+0000",
      "reminder" : "2016-10-12T20:32:54.000+0000",
      "title" : "Lorem ipsum dolor",
      "body" : "Lorem ipsum dolor sit amet, vel ei graece primis ullamcorper, unum denique an nam
      "category" : -737419,
      "_links" : {
        "self" : {
          "href" : "http://localhost:9999/note/1"
```

```
      },
      "note" : {
        "href" : "http://localhost:9999/note/1"
      },
      "createdBy" : {
        "href" : "http://localhost:9999/note/1/createdBy"
      }
    }
  }, {
    "created" : "2016-09-10T04:24:34.000+0000",
    "reminder" : "2016-10-11T01:32:43.000+0000",
    "title" : "Nullam disputando eam",
    "body" : "Nullam disputando eam at, ullamcorper conclusionemque sed ad. Sit urbanitas adole
    "category" : -10036753,
    "_links" : {
      "self" : {
        "href" : "http://localhost:9999/note/2"
      },
      "note" : {
        "href" : "http://localhost:9999/note/2"
      },
      "createdBy" : {
        "href" : "http://localhost:9999/note/2/createdBy"
      }
    }
  }, {
    "created" : "2016-09-10T04:25:34.000+0000",
    "reminder" : null,
    "title" : "Pro civibus salutatus",
    "body" : "Pro civibus salutatus at, eum ei propriae accusamus, duo vidisse prompta ne. Has
    "category" : -10036753,
    "_links" : {
      "self" : {
        "href" : "http://localhost:9999/note/3"
      },
      "note" : {
        "href" : "http://localhost:9999/note/3"
      },
      "createdBy" : {
        "href" : "http://localhost:9999/note/3/createdBy"
      }
    }
  }, {
    "created" : "2016-09-10T04:26:34.000+0000",
    "reminder" : "2016-10-13T04:12:12.000+0000",
    "title" : "An commodo legimus lucilius",
```

```json
      "body" : "An commodo legimus lucilius cum, cu clita noluisse apeirian duo. Cu sanctus bland
      "category" : -448910,
      "_links" : {
        "self" : {
          "href" : "http://localhost:9999/note/4"
        },
        "note" : {
          "href" : "http://localhost:9999/note/4"
        },
        "createdBy" : {
          "href" : "http://localhost:9999/note/4/createdBy"
        }
      }
    }, {
      "created" : "2016-09-10T04:27:34.000+0000",
      "reminder" : "2016-10-12T20:32:54.000+0000",
      "title" : "Te magna animal civibus",
      "body" : "Te magna animal civibus cum, assum efficiantur mel id. At nec meis oportere, niht
      "category" : -3381709,
      "_links" : {
        "self" : {
          "href" : "http://localhost:9999/note/5"
        },
        "note" : {
          "href" : "http://localhost:9999/note/5"
        },
        "createdBy" : {
          "href" : "http://localhost:9999/note/5/createdBy"
        }
      }
    } ]
  },
  "_links" : {
    "self" : {
      "href" : "http://localhost:9999/note"
    },
    "profile" : {
      "href" : "http://localhost:9999/profile/note"
    }
  }
}
```

2   The User Repository

CRUD User operations:

Operation	Method	Path	Request Body	Response	
		Request			
Operation	**Method**	**Path**	**Request Body**	**Response**	
Create user	POST	`/user`	User	**Status Header**	201 (Created) `Location: {URL}`
				Status Body	409 (Conflict) Cause
Read all users	GET	`/user`	-	**Status Body**	200 (OK) Multiple users
				Status Body	404 (Not Found) Error message
Read user	GET	`/user/{id}`	-	**Status Body**	200 (OK) User
				Status Body	404 (Not Found) Error message
Update user	PUT	`/user/{id}`	User	**Status**	201 (Created)
				Status Body	409 (Conflict) Cause
Delete user	DELETE	`/user/{id}`	-	**Status**	204 (No Content)
				Status Body	404 (Not Found) Error Message
Get the notes created by a user	GET	`/user/{id}/created`	-	**Status Body**	200 (OK) Note list
				Status	404 (Not Found)
Find user by name	GET	`/user/search/`↵`findByName?name={name}`	-	**Status Body**	200 (OK) User list , since "name" is unique, this is a single element array or an empty object.
				Status	404 (Not Found)

3   The Note Repository

Note CRUD operations: similar to User CRUD operations.

Other Note operations:

Operation	Request Method	Request Path	Response	
Get the user who created the note	GET	`/note/{id}/createdBy`	**Status** **Body**	200 (OK) User
			Status	404 (Not Found)
Find notes created between two dates	GET	`/note/search/findByCreated`⏎ `Between?start={date1}&end={date2}`	**Status** **Body**	200 (OK) Note list
			Status	404 (Not Found)
Find notes whose reminder is between two dates	GET	`/note/search/findByReminder`⏎ `Between?start={date1}&end={date2}`	**Status** **Body**	200 (OK) Note list
			Status	404 (Not Found)