Documentation

Important Utils
Following packages are extra installed while implementing backend functionality:

$ npm install bcrypt
$ npm install body-parser

Backend Documentation

POST /login
Description: Use email and password to check whether this user is valid in the database. Return a JSON object with all the user information with a “check” field equals to 1 if succeed and return a JSON object with only a “check” field equals to 0 if failed.
Body Parameters:

- email: String
- password: String

Expected Response:
Successfully authenticated:
Return


```
{
  "check": 1,
  "_id": "633c847a87bbbf6f3bd1361c",
  "email": {
    "data": "caleb@123.com",
    "display": true
  },
  "password": "$2b$10$grXWK0rmF4WdriG7jVyu2OzXLwj1xdYtzJw8q/gkBQr18EY60O0ti",
  "name": {
    "data": "",
    "display": true
  },
  "dateofbirth": {
    "data": null,
    "display": true
  },
  "gender": {
    "data": "",
    "display": true
  },
  "Program": {
    "data": "",
```

```
    "display": true
  },
  "Description": {
    "data": "",
    "display": true
  }
}
```


Failed:

Return


```
{
  "check": 0
}
```


POST /signup

Description: adds a new student to the student collection in the database for newly registered users, return a json file which contains attribute result.

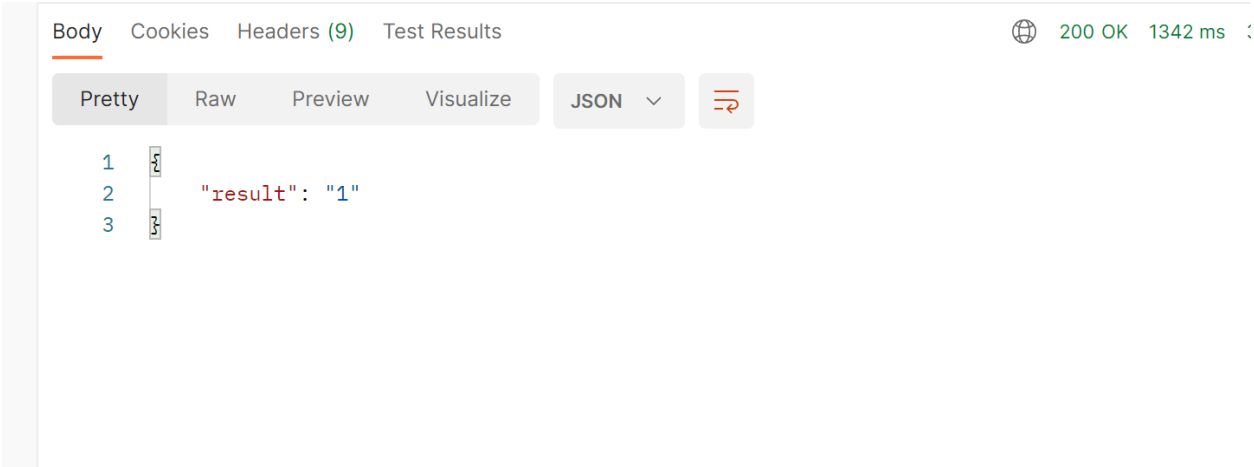
Body Parameters:

- Email: The email of the new registered student.
- Password: The password provided by the new student.

Expected Response:

- {result:"1"}

  The student has no duplicate email as another student in the database.



- {result:"0"}

  The student has no duplicate email as another student in the database or there is an error during the connection process.

Body Cookies Headers (9) Test Results 200 OK 1204 ms 302 B Save Response

Pretty Raw Preview Visualize JSON


```
{
    "result": "0"
}
```


DELETE /deleteUser

Description: Delete an existing user with the corresponding email passed by the body parameters from the student collection in the database, return a json file which contains 3 parts including the req (all body parameters), result of 0 (failure) /1 (success), and a message.

Body Parameters:

- Required
  - Email: The email of the existing student.
- Optional
  - All other information

Expected Response:

- Body parameter example:

Authorization Headers (1) Body Pre-request Script Tests Code

form-data x-www-form-urlencoded raw binary JSON (application/json)


```
{"_id":{"$oid":"633efce10cc286be9c9f6b9f"},"email":{"data":"alfred@utoronto.ca","display":true},"password":"$2b$10$beEJ3TqgTvQTxhc4/yCFj
./FFIPjA7b1GPFl1bb7tgTVTwFeOHvXu","name":{"data":"","display":true},"dateofbirth":{"data":null,"display":true},"gender":{"data":"","display":true}
,"Program":{"data":"","display":true},"Description":{"data":"","display":true}}
```


Note: Only the email part is needed to delete a user, but this is just an example with all the optional information

- On success (existing user with the given email is deleted in database):

```
{
    "data": {
        "_id": {
            "$oid": "633efce10cc286be9c9f6b9f"
        },
        "email": {
            "data": "alfred@utoronto.ca",
            "display": true
        },
        "password": "$2b$10$beEJ3TqgTvQTxhc4/yCFj./FFIPjA7b1GPFl1bb7tgTVTwFeOHvXu",
        "name": {
            "data": "",
            "display": true
        },
        "dateofbirth": {
            "data": null,
            "display": true
        },
        "gender": {
            "data": "",
            "display": true
        },
        "Program": {
            "data": "",
            "display": true
        },
        "Description": {
            "data": "",
            "display": true
        }
    },
    "result": 1,
    "message": "User deleted."
}
```


- On failure


```
{
    "data": {
        "_id": {
            "$oid": "633efce10cc286be9c9f6b9f"
        },
        "email": {
            "data": "alfred@utoronto.ca",
            "display": true
        },
        "password": "$2b$10$beEJ3TqgTvQTxhc4/yCFj./FFIPjA7b1GPFl1bb7tgTVTwFeOHvXu",
        "name": {
            "data": "",
            "display": true
        },
        "dateofbirth": {
            "data": null,
            "display": true
        },
        "gender": {
            "data": "",
            "display": true
        },
        "Program": {
            "data": "",
            "display": true
        },
        "Description": {
            "data": "",
            "display": true
        }
    },
    "result": 0,
    "message": "Error when deleting."
}
```

POST /edit

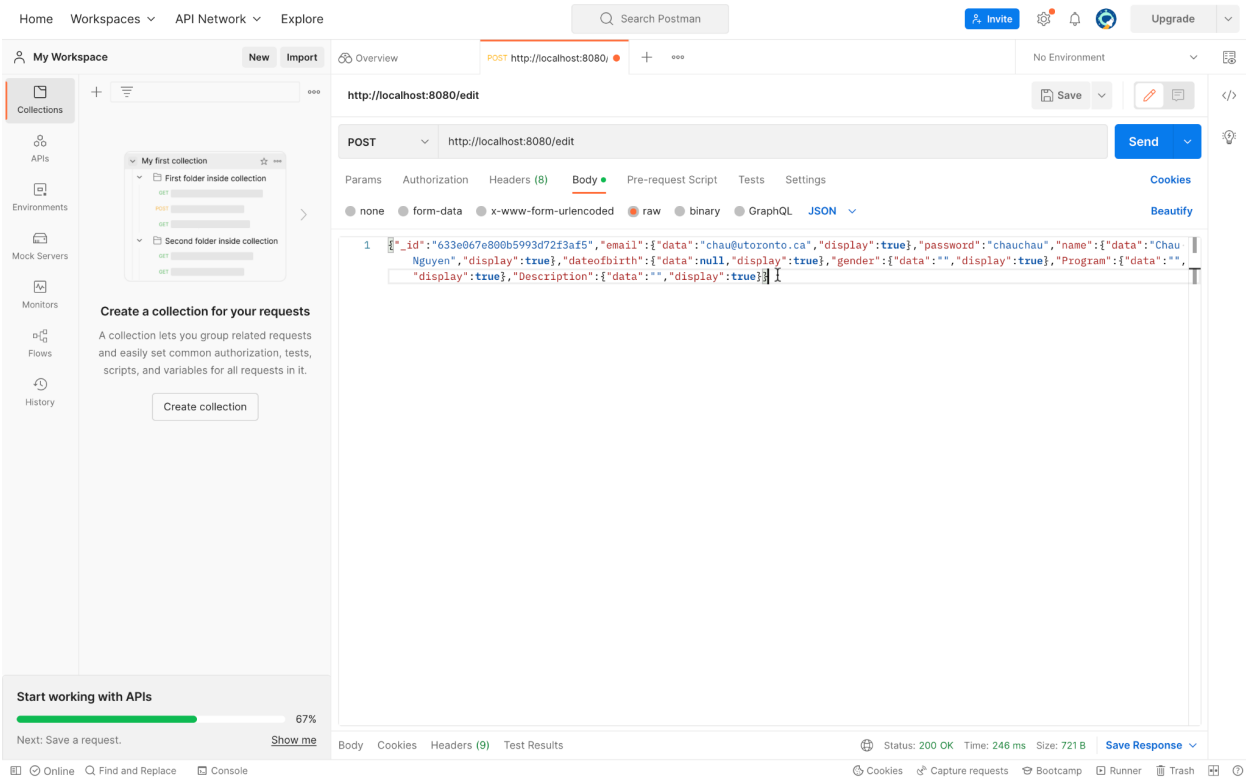
Description: Edit an existing user's profile with the corresponding email passed by the body parameters from the student collection in the database, return a json file which contains 3 parts including the req (all body parameters), result of 0 (failure) /1 (success), and a message.

Body Parameters:

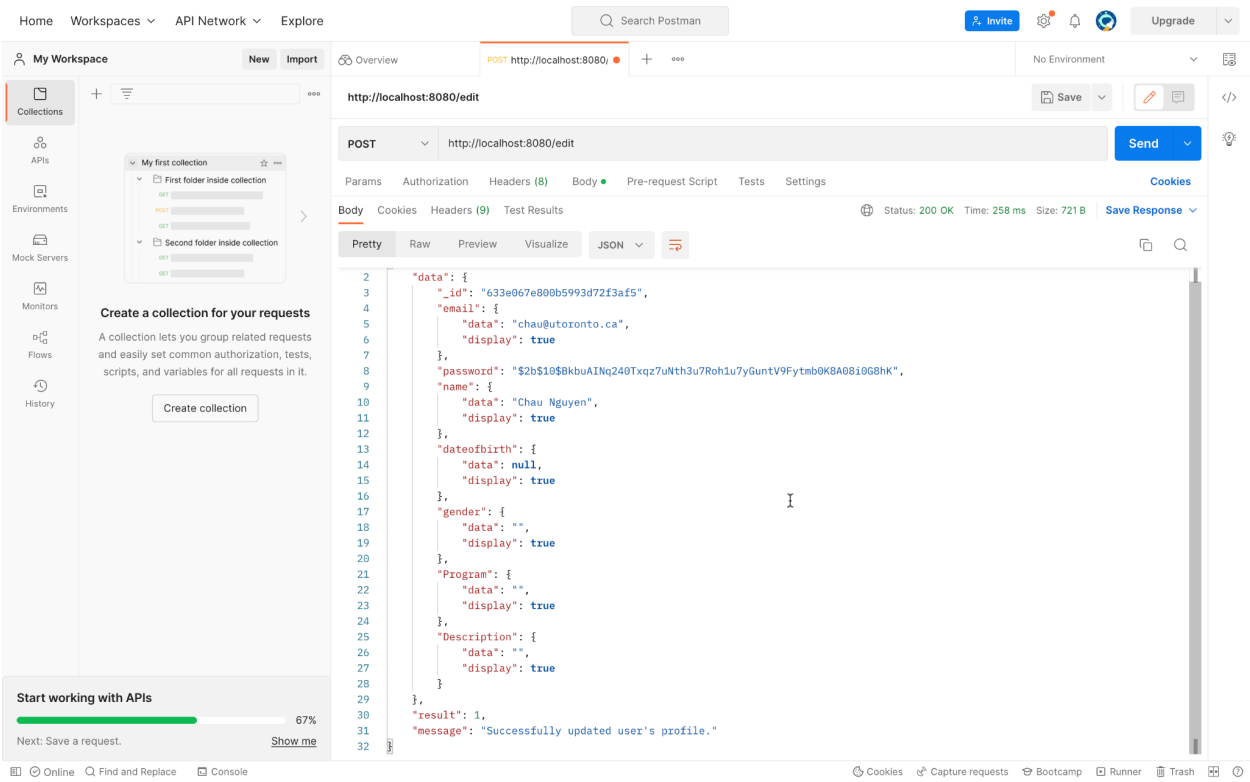
- Required
    - Email: The email of the existing student.
    - Name, Gender, DateOfBirth, Program, Description: New data input by user.

Expected Response:

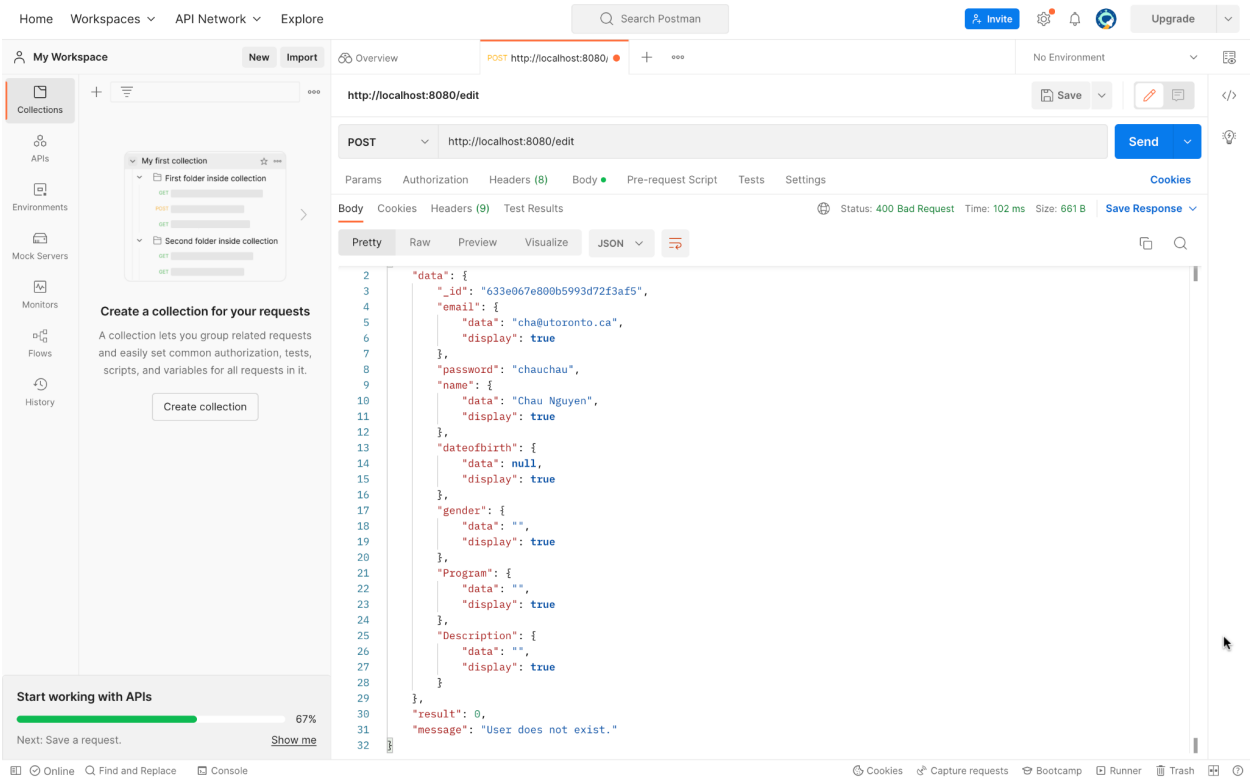
- Body parameter example:



- On success: Email address is registered in the database.



- On failure: Email address is not registered in the database. Connection to database/server fails.



POST/searchprogramskey

Description: By using a string of keywords, filter out the programs in the database under program collection, Return a list of json files which contains the list of program type, list of program name and the length of the list that matches the searching key.

Body Parameters:

- keywords: String

Expected Response

If not found any similar programs:

```
{
    "length": 0,
    "result": []
}
```

If found similar programs:

```
{
    "length": 2,
    "result": [
        {
            "name": "Major (Co-operative) Program in Computer Science",
            "type": "Major"
        },
        {
            "name": "Major test",
            "type": "Major"
        }
    ]
}
```

POST/searchprogramname

Description: By using program name, find out one specific program in the database under program collection, Return json file that contains all the information about this specific program..

Body Parameters:

- name: String

Expected Response

If program name not found:

```
{
    "result": 0,
    "item": []
}
```

If found the specific program:


```
"result": 1,
"item": [
    {
        "_id": "634752535b8a89aac1586600",
        "name": "Major test",
        "type": "Major",
        "area": "Computer Science",
        "degree": "BSc",
        "co-op": "Students must satisfactorily complete three Co-op work terms, each of four-months duration, one of which can be duri
            term, students must be enrolled in the Major (Co-op) Program in Computer Science and have completed at least 7.0 credits,
            CSCA48H3, CSCA67H3, MATA22H3, MATA31H3, MATA37H3). In addition to their academic program requirements, Co-op students comp
            are designed to prepare students for their job search and work term experience, and to maximize the benefits of their Co-o
            to assist students in developing the skills and tools required to secure work terms that are appropriate to their program
            workplace. These courses must be completed in sequence, and are taken in addition to a full course load. They are recorded
            considered to be additive credit to the 20.0 required degree credits. No additional course fee is assessed as registration
            Preparation Course Requirements: 1. COPB50H3/ (COPD01H3) – Foundations for Success in Arts & Science Co-op - Students ente
            postsecondary) will complete this course in Fall or Winter of their first year at UTSC. Enrolment in each section is based
            Science, Mathematics and Statistics enroll in the Fall semester while all other Arts & Science Co-op admission categories
            year to year. - Current UTSC students entering Co-op in April/May will complete this course in the Summer semester. - Curr
            complete this course in the Fall semester. 2. COPB51H3/ (COPD03H3) – Preparing to Compete for your Co-op Work Term - This
            first scheduled work term. 3. COPB52H3/ (COPD11H3) – Managing your Work Term Search & Transition to Work - This course wil
            scheduled work term. 4. COPC98H3/ (COPD12H3) – Integrating Your Work Term Experience Part I - This course will be complete
            term. 5. COPC99H3/ (COPD13H3) – Integrating Your Work Term Experience Part I - This course will be completed four months i
            programs that require the completion of 3 work terms and/or four months in advance of any additional work terms that have
            Students must be available for work terms in each of the Fall, Winter and Summer semesters and must complete at least one
            semester. This, in turn, requires that students take courses during at least one Summer semester.",
        "enrolment": "Enrolment in the Major (Co-operative) Program in Computer Science is limited. Current Co-op Students: Students a
            study must request a Co-op Subject POSt on ACORN upon completion of 4.0 credits. Students must have completed the required
            grades, described in the Enrolment Requirements for the Major in Computer Science. In addition, they must also have achiev
            Prospective Co-op Students: Prospective students (i.e., those not yet admitted to a Co-op Degree POSt) must meet the enrol
```

```
        Students must be available for work terms in each of the Fall, Winter and Summer semesters and must complete at least one of th
        semester. This, in turn, requires that students take courses during at least one Summer semester.",
    "enrolment": "Enrolment in the Major (Co-operative) Program in Computer Science is limited. Current Co-op Students: Students admitt
        study must request a Co-op Subject POSt on ACORN upon completion of 4.0 credits. Students must have completed the required A-le
        grades, described in the Enrolment Requirements for the Major in Computer Science. In addition, they must also have achieved a
        Prospective Co-op Students: Prospective students (i.e., those not yet admitted to a Co-op Degree POSt) must meet the enrolment
        least 2.75 across all attempted courses. Students must submit a program request on ACORN. Deadlines follow the Limited Enrolmer
        of the Registrar each year. Failure to submit the program request on ACORN will result in the student's application not being c
    "graduation": "The course requirements of the Co-operative Major Program in Computer Science are identical to those of the Major Pr
        program, students must maintain a CGPA of 2.5 or higher throughout the program. To complete the program, students must meet the
    "description": "The Major (Co-op) Program in Computer Science is a Work Integrated Learning (WIL) program that combines academic st
        and/or non-profit sectors. The program provides students with the opportunity to develop the academic and professional skills a
        continue on to graduate training in an academic field related to Computer Science upon graduation.",
    "note": null,
    "status": "Available"
```


POST /searchcourse

Description: By using a string of keywords, search in the database under course collection, for every course that has a similar name to the keywords. Return a JSON object which contains every course object matched to the keywords.

Body Parameters:

- keywords: String (give keywords:"", will give result based on Breadth)
- breadth: String (give Breadth:"", will disable Breadth and just search on keywords)
  If both keywords and Breadth give an empty string, will return all the courses in the DB.

Expected Response:

If not found any similar course:

```
{
    "check": 0
}
```


If found any similar course:


```
{
    "check": 1,
    "a": [
        {
            "name": "Africa in the World: An Introduction",
            "code": "AFSA01H3"
        },
        {
            "name": "Introduction to Software Engineering",
            "code": "CSCC01H3"
        },
        {
            "name": "Software Design",
            "code": "CSCB07H3"
        },
        {
            "name": "Software Tools and Systems Programming",
            "code": "CSCB09H3"
        },
        {
            "name": "Supervised Introductory Research in Psychology",
            "code": "PSYB90H3"
        },
        {
            "name": "Bioinorganic Chemistry",
            "code": "CHMD69H3"
        },
```


POST /courseInfo

Description: By giving a course code, return all the information about that corresponding course.

Body Parameters:

- code: String

Expected Response:

If found:


```
{
    "check": 1,
    "course": {
        "_id": "63459124a6fe8574e54aafdc",
        "code": "PSYB90H3",
        "name": "Supervised Introductory Research in Psychology",
        "description": "This course provides an introduction to, and experience in, ongoing theoretical and empirical research in any field of psychology. Supervision of the work is
            arranged by mutual agreement between student and instructor. Students will typically engage in an existing research project within a supervisor's laboratory. Regular
            consultation with the supervisor is necessary, which will enhance communication skills and enable students to develop proficiency in speaking about scientific knowledge
            with other experts in the domain. Students will also develop documentation and writing skills through a final report and research journal. This course requires students to
            complete a permission form obtained from the Department of Psychology. This form must outline agreed-upon work that will be performed, must be signed by the intended
            supervisor, and returned to the Department of Psychology.",
        "breadth": "Social and Behavioural Sciences",
        "exclusions": [
            "ROP299Y",
            "LINB98H3"
        ],
        "prerequisites": [
            "PSYA01H3 and PSYA02H3 with at least an 80% average across both courses",
            "a minimum of 4.0 credits [including PSYA01H3 and PSYA02H3] in any discipline, with an average cGPA of 3.0",
            "a maximum of 9.5 credits completed",
            "enrolment in a Psychology, Mental Health Studies, Neuroscience or Psycholinguistics program"
        ],
        "corequisites": [],
        "recommended": [
            "B-level courses in Psychology or Psycholinguistics"
        ],
        "notes": "1. Students receive a half credit spread across two-terms, therefore, the research in this course must take place across two consecutive terms. 2. Priority will be
            given to students enrolled in a Specialist/Major program in Psychology or Mental health studies, followed by students enrolled in a Specialist/Major program in
            Neuroscience or Psycholinguistics. 3. Enrolment will depend each year on the research opportunities available with each individual faculty member and the interests of the
            students who apply.",
        "status": "Available"
    }
}
```


If not found:

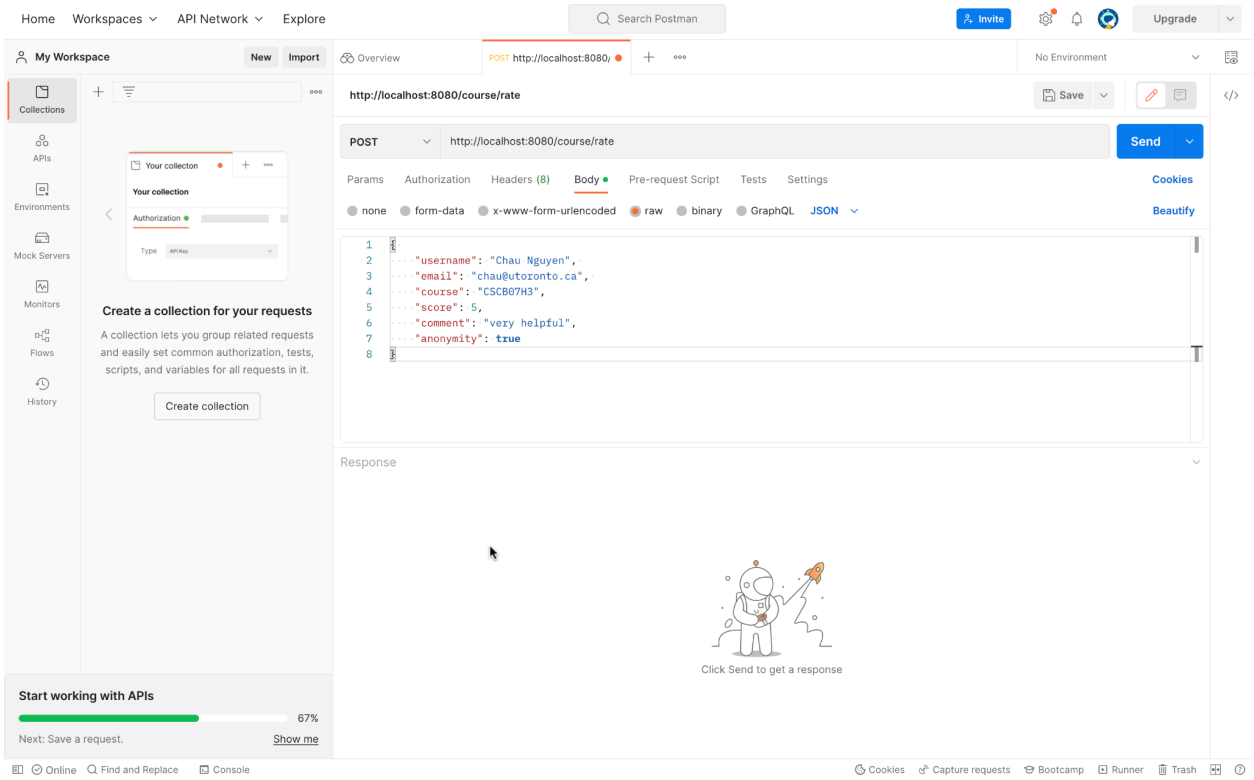

```
{
    "check": 0
}
```


POST /course/rate

Description: Create a new document in the database for users' rating and comment on courses.

Response Body:

```
{
    username: String,
    email: String,
    course: String,
    score: Integer,
    comment: String,
    anonymity: Boolean [default: true]
}
```

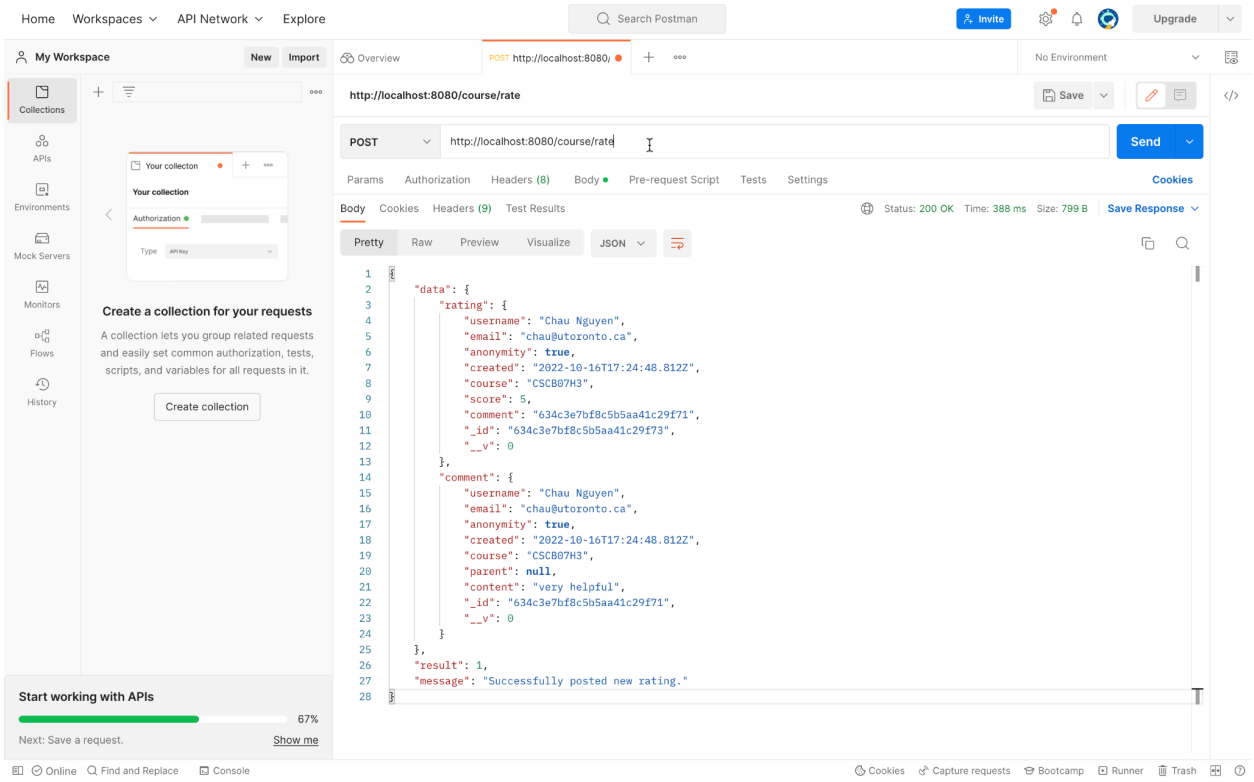


Expected Response:

```
{
    data: {
        rating: {
            Username: String,
            email: String,
            Anonymity: Boolean;
            created: Date,
            course: String,
            score: Integer,
            comment: String
        },
        comment: {
            Username: String,
            email: String,
            anonymity: Boolean
            created: Date,
            course: String,
            parent: String,
            content: String,
            }
    },
    result: Integer [0 or 1],
    message: String
```

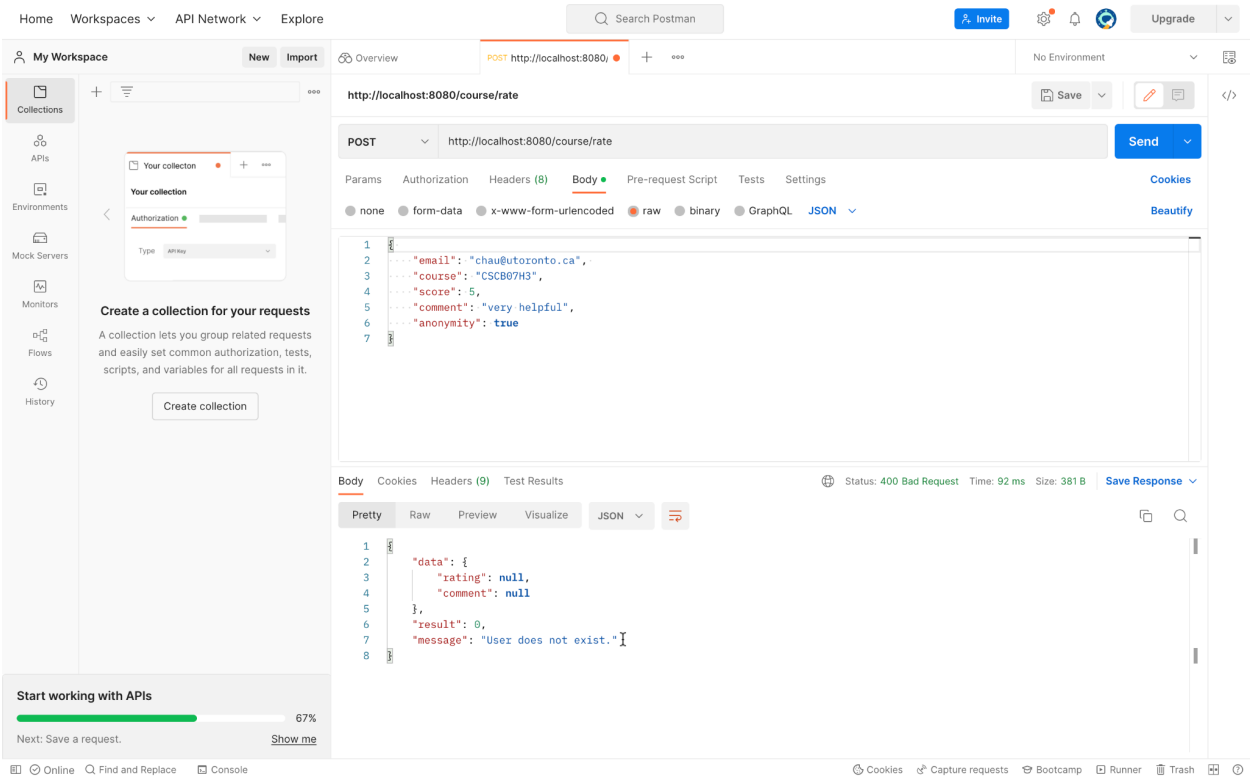
}

On success: User exists, username and email match. Course exists.

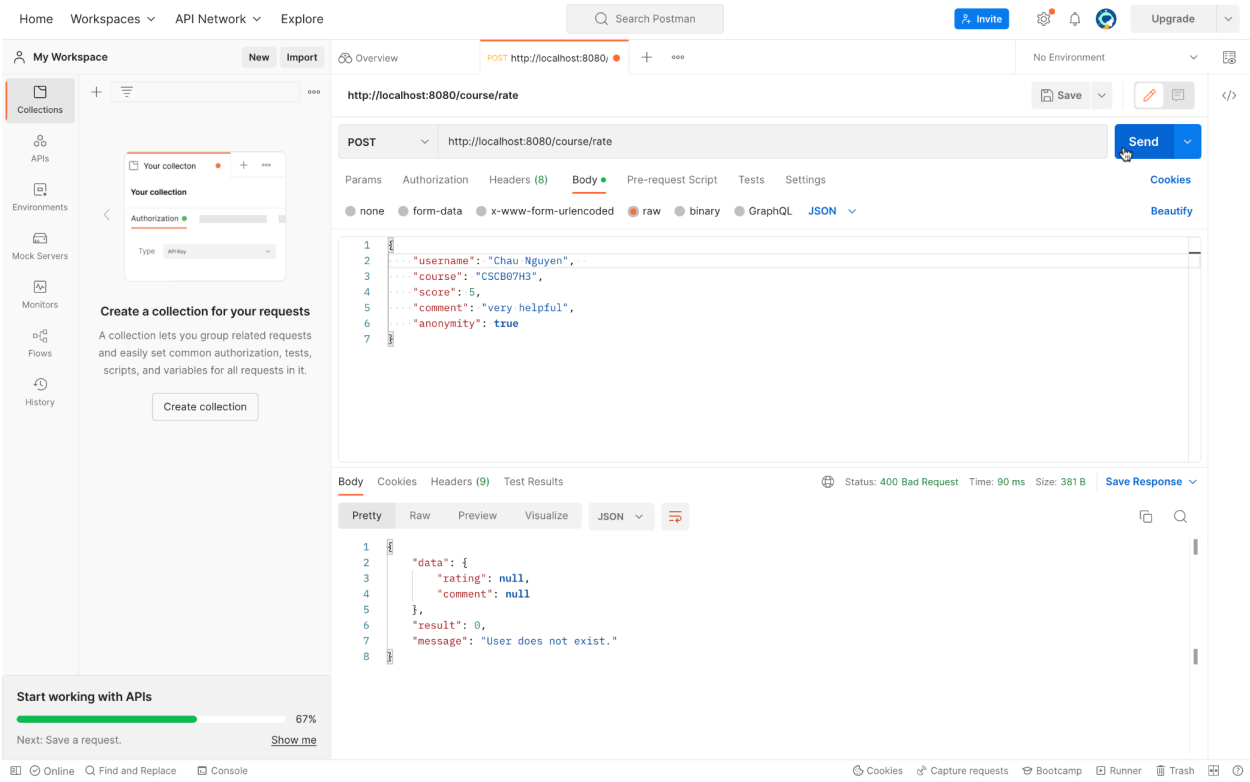


On failure:

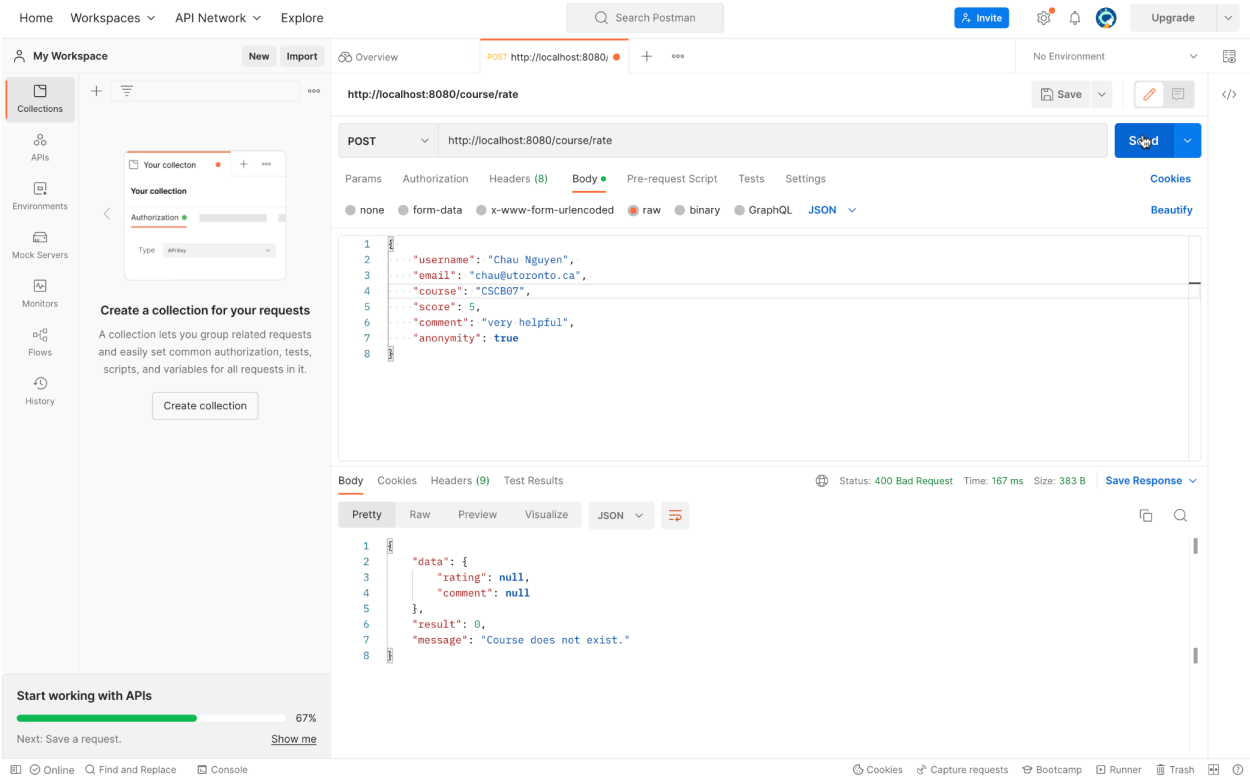
- Missing username field



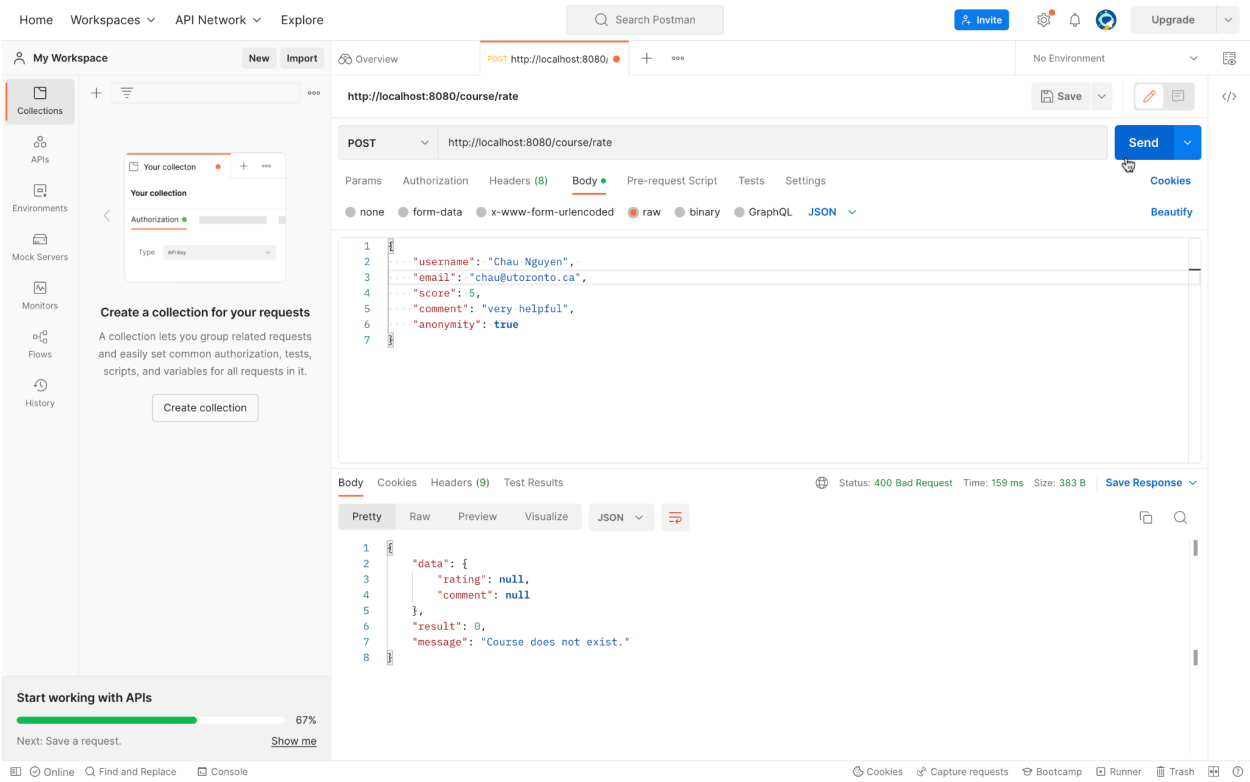
- Missing email field



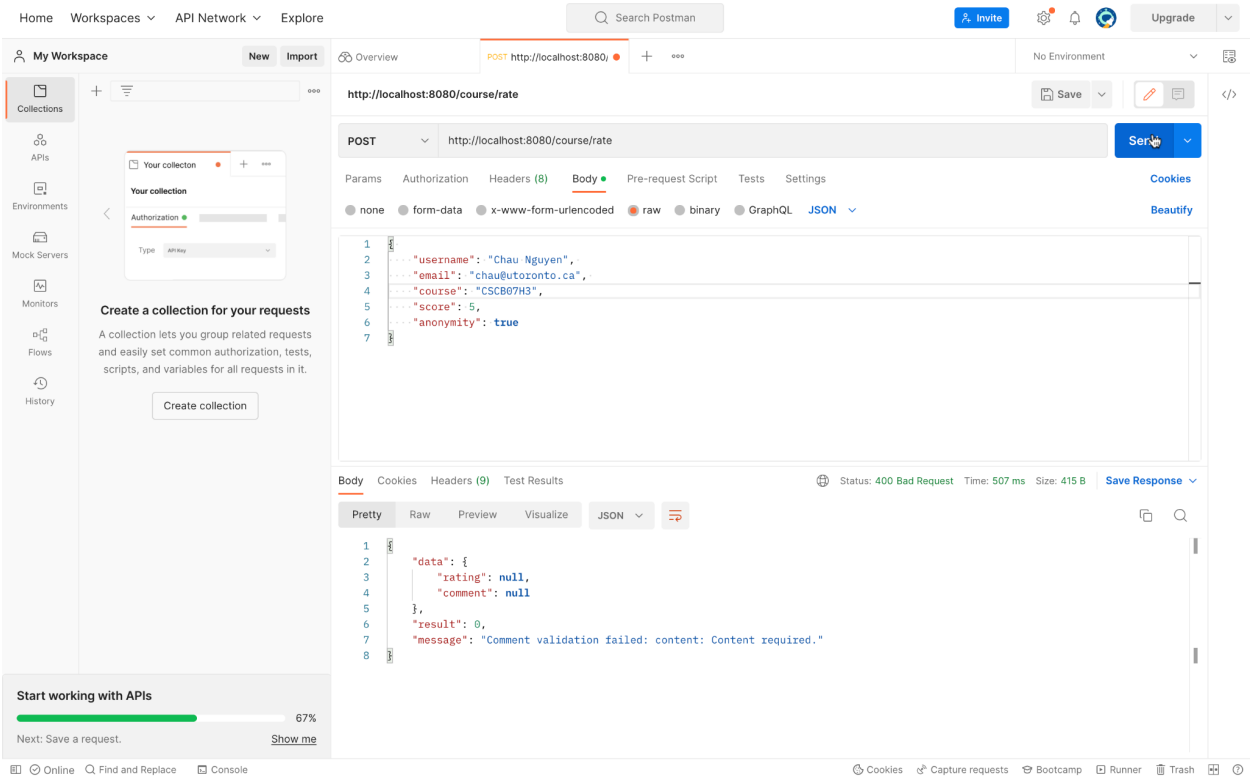
- Course code does not exist



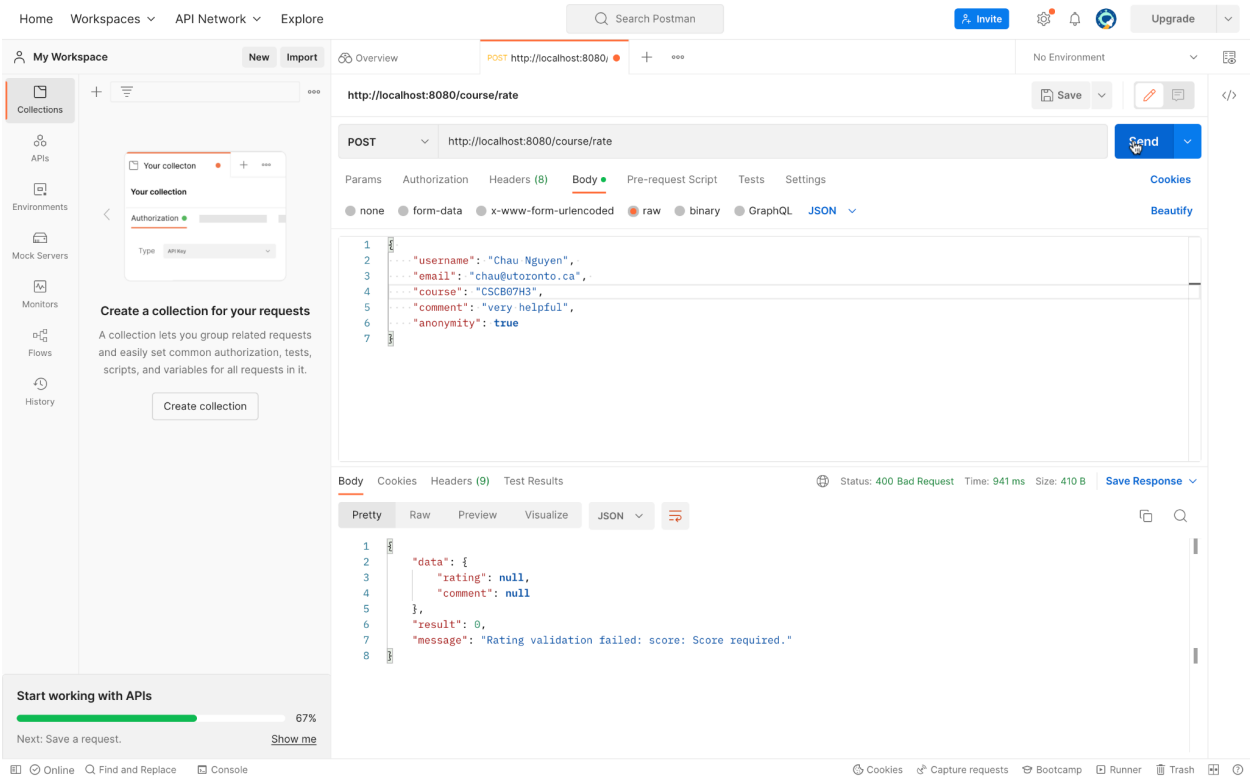
- Missing course code field



- Missing comment field



- Missing score field



POST /seeCourseRatings

Description: By giving a course, return all the ratings and each rating's corresponding comment (if any).

Body Parameters:

- Required
    - Course: String

Expected Response:

- Return a json file containing all the returning data
- Body parameter example:

Authorization | Headers (1) | Body | Pre-request Script | Tests

form-data | x-www-form-urlencoded | raw | binary | JSON (application/json)

```
{"course":"CSCC01H3"}
```

- Returned json file for the body parameter example:

Pretty | Raw | Preview | JSON


```
{
    "result": 1,
    "ratings": [
        {
            "_id": "63480a6dbd7bfae32073d358",
            "email": "chau@utoronto.ca",
            "anonymity": true,
            "created": "2022-10-13T12:53:29.644Z",
            "course": "CSCC01H3",
            "score": 10,
            "comment": "63480a6cbd7bfae32073d356",
            "__v": 0
        },
        {
            "_id": "634840d017ab8d442c4258f9",
            "email": "chau@utoronto.ca",
            "anonymity": true,
            "created": "2022-10-13T16:44:03.474Z",
            "course": "CSCC01H3",
            "score": 5,
            "comment": "634840d017ab8d442c4258f7",
            "__v": 0
        },
        {
            "_id": "63487a8a1eb73ec8153c41b0",
            "email": "hpttesting.com",
            "anonymity": true,
            "created": "2022-10-13T20:47:47.789Z",
            "course": "CSCC01H3",
            "score": 5,
            "comment": "63487a891eb73ec8153c41ae",
            "__v": 0
        }
    ],
    "comments": [
        {
            "_id": "63480a6cbd7bfae32073d356",
```

```
    "comments": [
        {
            "_id": "63480a6cbd7bfae32073d356",
            "email": "chau@utoronto.ca",
            "anonymity": true,
            "created": "2022-10-13T12:53:29.644Z",
            "course": "CSCC01H3",
            "parent": null,
            "content": "test",
            "__v": 0
        },
        {
            "_id": "634840d017ab8d442c4258f7",
            "email": "chau@utoronto.ca",
            "anonymity": true,
            "created": "2022-10-13T16:44:03.474Z",
            "course": "CSCC01H3",
            "parent": null,
            "content": "i don't recommend this course to anyone wishing to have enough sleep",
            "__v": 0
        },
        {
            "_id": "63487a891eb73ec8153c41ae",
            "email": "hpttesting.com",
            "anonymity": true,
            "created": "2022-10-13T20:47:47.789Z",
            "course": "CSCC01H3",
            "parent": null,
            "content": "hello",
            "__v": 0
        }
    ],
    "message": "returning course ratings."
}
```


- result: 1 on success, 0 on failure

Note: failure only occurred for database issues for fetching data. In other words, even if a course has no ratings nor any corresponding comments, it would return a json file with an empty list of ratings, and an empty list of comments. However, the result would still be 1 indicating success.
i.e.


```
{
    "result": 1,
    "ratings": [],
    "comments": [],
    "message": "returning course ratings."
}
```

Frontend Documentation

How to update React dependencies and start frontend:

```
$ npm install
$ npm start
```

File Structure

- The file /shortcut/frontend/src/routes.js clarifies all routes between pages.

- The folder /shortcut/frontend/src/Components contains frontend elements which are defined separately with respective .js and .css files.

- The folder /shortcut/frontend/src/Images contains image files that are/will be used in pages.

- The folder /shortcut/frontend/src/Pages contains folders for distinct pages. In the folders are .js and .css files for respective pages.

Page Summaries

- **Login**: This is the opening page of the website. An existing user can sign in with the correct email-password combination. The user will be sent to the Home page upon a successful login operation. A new user can navigate to the Signup page through a link.

- **Signup**: This page allows new users of the website to create a new account. The operation will be interrupted if the users provide invalid email/password inputs or fail to confirm the password. Users can go back to the Login page with a button.

- **Home**: This is the central page of the website. It allows users to navigate to the main sections of the website. (For sprint 1, users can only navigate to the Profile page.)

- **Profile**: This page allows users to view and edit their personal information. Users can choose to sign out or delete their accounts, after which they will be sent back to the Login page if the operation is successful. Users can also go back to the Home page through a button.

- **CourseDescription**: This page displays the course description. It also allows users to navigate to the respective CommentForm and CommentView pages: to make new comments or view other's comments.

- **GeneralCourse**: This page allows searching for courses with keywords and provides proper associations. Once the content is clicked, the user will be directed to the respective CourseDescription page.

- **ProgramDescription**: This page displays the program information. Including: descriptions, requirements, enrolments, etc.

- **GeneralProgram**: This page allows searching for programs with keywords and provides proper associations. Once the content is clicked, the user will be directed to the respective ProgramDescription page.

- **CommentForm**: This page comes after a user intends to create a new rating on a course description page. The user can input a score and a piece of comment and decide whether to publish it anonymously. In either case of canceling or submitting the form, the user will return to the course description page.

- **CommentView**: Currently, this page allows a user to view all ratings and comments about the course. The user can return to the course page.

- Upcoming pages…

Important Utils

Following packages are extra installed while implementing frontend functionality:

```
$ npm install react-router-dom@6
$ npm install react-datepicker
$ npm install react-icons
$ npm install @mui/material @emotion/react @emotion/styled
```

Database Schema

```
Student    {
                email: [data: String, display: Boolean],
                password: String,
                dateofbirth: [data: String, display: Boolean],
                gender: [data: String, display: Boolean],
                Program: [data: String, display: Boolean],
                Description: [data: String, display: Boolean]
           }
Course     {
                code: String,
```

```
        name: String,
        description: String,
        breadth: String
        exclusions: [String],
        prerequisites: [String],
        corequisites: [String],
        recommended: [String],
        note: String,
        status: String
    }
Program {
        name: String,
        type: String,
        area: String,
        degree: String,
        coop: String,
        enrolment: String,
        graduation: String,
        description: String,
        note: String,
        status: String(offered,not offered)
    }
Rating  {
        username: String,
        email: String,
        created: Date,
        course: String,
        score: Integer,
        comment: String,
        anonymity: Boolean
    }
Comment {
        Username: String,
        email: String,
        created: Date,
        parent: String,
        content: String,
        anonymity: Boolean
    }
```