Configuration:

There is a .env file in the main project directory containing these 3 elements:

PORT =3000

DB_URL= **your db url**

TOKEN_SECRET=jkbclkneuibyeruiasbeub

How to start:

1. When you first run the app, seeding will be done. You might need to run the app a few times for seeding to be complete.
2. Login with the email of the hr member you will find in the database and the default password "123456" and a new password { "email": **email from databse**, "password": "123456", "newPassword": "pass123" }
3. Use the /hr/addStaff route to add these three staff members:

```
{"name":"firstac",
    "gender": true,
    "salary": 2000,
    "email":"ac1@gmail.com",
    "day_off":"Monday",
    "office_location":"c1.101",
    "role1":"instructor",
    "role2":"hod",
    "faculty": "met",
    "dept_id": "csen"}

{"name":"secondac",
    "gender": true,
    "salary": 2000,
    "email":"ac1@gmail.com",
    "day_off":"Monday",
    "office_location":"c1.101",
    "role1":"instructor",
    "faculty": "met",
    "dept_id": "csen"
}
{"name":"thirdac",
    "gender": true,
    "salary": 2000,
    "email":"ac1@gmail.com",
```

```
        "day_off":"Monday",
        "office_location":"c1.101",
        "role1":"instructor",
        "faculty": "met",
        "dept_id": "csen"
}

{"name":"firstta",
        "gender": true,
        "salary": 2000,
        "email":"ta1@gmail.com",
        "day_off":"Monday",
        "office_location":"c1.101",
        "role1":"instructor",
        "faculty": "met",
        "dept_id": "csen"}


{"name":"secondta",
        "gender": true,
        "salary": 2000,
        "email":"ac5@gmail.com",
        "day_off":"Monday",
        "office_location":"c1.101",
        "role1":"ta",
        "faculty": "met",
        "dept_id": "csen"}
```

4. Log in to the hod of met account {"email": "ac1@gmail.com", "password": "123456" , "newPassword" : "pass123"}
5. Use the route /assignCourseInstructor to assign firstac and secondac to csen704 (preexisting course in the system)
      {"instructor_id": **firstac id from the db**, "course_id": "csen704"}
      {"instructor_id": **secondac id from the db**, "course_id": "csen704"}
6. Use the route /assignCourseTA to assign firstta and secondta to csen704 (preexisting course in the system)
      {"ta_id": **firstta id from the db**, "course_id": "csen704"}
      {"ta_id": **secondta id from the db**, "course_id": "csen704"}

ALL Staff:

Functionality: Log in with a unique email and a password.
Route: /login
Request type: POST
Request body: {"email": "ac1@gmail.com", "password": "pass123"}
Response: authentication token. Example:
eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJpZCI6ImhyLTEzIiwicm9sZTEiOiJociIsImlhdCI6MTYwOD
c1MzY5NX0.URwX7Tu4OypNMM7J0k4qDrHumFXNr7N_E_b3qDSMGLM

Functionality: Log out from the system.
Route: /logout
Request type: POST
Request body:
Parameters:
Response: confirmation message. Example: logout successful

Functionality: view their profile
Route: /myProfile
Request type: GET
Request body:
Parameters:
Response: name**,** email, day off, office location, salary, leave balance, schedule, info if available.
Example: {

```
    "name": "firstac",
    "email": "ac1@gmail.com",
    "day_off": "Saturday",
    "salary": 2000,
    "office": "C1.101",
    "leave_balance": 2.5,
    "schedule": {
        "_id": "5fe4ae51094c587050e0dd14",
        "saturday": [],
        "sunday": [{"replacement": false,
                "_id": "5fe50d00071c316f0ccd146f",
                "id": 3,
                "type": "tut",
                "location_id": "C1.101",
                "course_id": "csen704",
                "group": "t16" },
            { "replacement": false,
                "_id": "5fe50d00071c316f0ccd1470",
                "id": 3,
                "type": "tut",
                "location_id": "C1.101",
                "course_id": "csen704",
```

```
            "group": "t16"}],
        "monday": [],
        "tuesday": [],
        "wednesday": [],
        "thursday": []     },
    "information": "studied in some university. i love icecream"}
```

Functionality: Update their profile
Route: / updateProfile
Request type: POST
Request body: {"info":"studied in some university. i love icecream"}
Parameters:
Response: confirmation. Example: updated profile info: studied in some university. i love icecream

Functionality: Reset their passwords
Route: /resetPassword
Request type: POST
Request body: {"password": "somepass123"}
Parameters:
Response: confirmation message. Example: password reset done

Functionality: Sign in
Route: /signIn
Request type: POST
Request body: {}
Parameters:
Response: timestamp. Example: `{"time": "2020-12-25T07:23:04.347Z"}`

Functionality: Sign out
Route: /signOut
Request type: POST
Request body: {}
Parameters:
Response: timestamp. Example: `{"time": "2020-12-25T07:23:04.347Z"}`

Functionality: View all their attendance records
Route: /viewAttendance/:month/:year
Request type: GET
Request body: {}
Parameters: viewAttendance/12/2020
Response: attendance records array. Example: `{"_id": "5fe4ae51094c587050e0dd17",`

```
    "staff_id": "ac-1",
    "attendance": [ { "status": "attended",
            "missing_hours": 30240,
```

```
                "_id": "5fe593585449fe665cad4987",
                "day": "2020-12-25T07:23:04.347Z",
                "signs": [{"_id": "5fe593585449fe665cad4988",
                         "signIn": "2020-12-25T07:23:04.347Z",
                         "signOut": null}]],
        "__v": 1}
```

Functionality: View if they have missing days.
Route: /viewMissingDays
Request type: GET
Request body: {}
Parameters:
Response: Records of missing days. Example: [{"status": "missing",

```
        "missing_hours": 30240,
        "_id": "5fe593585449fe665cad4987",
        "day": "2020-12-25T07:23:04.347Z",
        "signs": [
            {"_id": "5fe593585449fe665cad4988",
                "signIn": "2020-12-25T07:23:04.347Z",
                "signOut": null}]}    ]
```

Functionality: View if they have hours or extra hours.
Route: /viewMissingHours
Request type: GET
Request body: {}
Parameters:
Response: accumulated missing hours for the month. Example: `missing hours: 7:47`

HOD:

Functionality: Assign a course instructor for each course in his department
Route: /assignCourseInstructor
Request type: POST
Request body: {"instructor_id":"ac-1","course_id":"csen704"}

Parameters:
Response: confirmation message.

Functionality: Assign a course instructor for each course in his department
Route: /assignCourseTA
Request type: POST
Request body: {"ta_id":"ac-4","course_id":"csen704"}

Parameters:
Response: confirmation message.

Functionality: View all the staff in his/her department or per course along with their profiles.
Route: /viewStaff
Request type: GET
Request body: optional {"course_id":"csen704"}

Parameters:
Response: staff profiles (including their schedules). Example:

```
[
    {
        "first_login": false,
        "day_off": "Saturday",
        "leave_balance": 2.5,
        "courses": [
            "csen704"
        ],
        "accidental_leave": 0,
        "_id": "5fe4ae51094c587050e0dd15",
        "id": "ac-1",
        "name": "firstac",
        "email": "ac1@gmail.com",
        "salary": 2000,
        "gender": true,
        "office_location": "C1.101",
        "role1": "instructor",
        "faculty": "MET",
        "department": "CSEN",
        "role2": "hod",
        "schedule": {
            "_id": "5fe4ae51094c587050e0dd14",
            "saturday": [],
```

```json
        "sunday": [
            {
                "replacement": false,
                "_id": "5fe50d00071c316f0ccd146f",
                "id": 3,
                "type": "tut",
                "location_id": "C1.101",
                "course_id": "csen704",
                "group": "t16"
            },
            {
                "replacement": false,
                "_id": "5fe50d00071c316f0ccd1470",
                "id": 3,
                "type": "tut",
                "location_id": "C1.101",
                "course_id": "csen704",
                "group": "t16"
            }
        ],
        "monday": [],
        "tuesday": [],
        "wednesday": [],
        "thursday": []
    },
    "__v": 2,
    "info": "studied in some university. i love icecream"
},
{
    "first_login": true,
    "day_off": "Saturday",
    "leave_balance": 2.5,
    "courses": [],
    "accidental_leave": 0,
    "_id": "5fe4b014094c587050e0dd19",
    "id": "ac-2",
    "name": "secondac",
    "email": "ac2@gmail.com",
    "salary": 2000,
    "gender": true,
    "office_location": "C1.101",
    "role1": "instructor",
    "faculty": "MET",
    "department": "CSEN",
    "role2": "",
    "schedule": {
        "_id": "5fe4b014094c587050e0dd18",
        "saturday": [],
```

```json
            "sunday": [],
            "monday": [],
            "tuesday": [],
            "wednesday": [],
            "thursday": []
        },
        "__v": 0
    },
    {
        "first_login": true,
        "day_off": "Saturday",
        "leave_balance": 2.5,
        "courses": [
            "CSEN704"
        ],
        "accidental_leave": 0,
        "_id": "5fe4baa767ee7670a03c04b7",
        "id": "ac-3",
        "name": "firstta",
        "email": "ta1@gmail.com",
        "salary": 2000,
        "gender": true,
        "office_location": "C1.101",
        "role1": "instructor",
        "faculty": "MET",
        "department": "CSEN",
        "role2": "",
        "schedule": {
            "_id": "5fe4baa767ee7670a03c04b6",
            "saturday": [],
            "sunday": [],
            "monday": [],
            "tuesday": [],
            "wednesday": [],
            "thursday": []
        },
        "__v": 0
    },
    {
        "first_login": false,
        "day_off": "Saturday",
        "leave_balance": 2.5,
        "courses": [
            "csen704"
        ],
        "accidental_leave": 0,
        "_id": "5fe4bd6d9f938f6360981ea7",
        "id": "ac-4",
```

```json
            "name": "secondta",
            "email": "ta2@gmail.com",
            "salary": 2000,
            "gender": true,
            "office_location": "C1.101",
            "role1": "ta",
            "faculty": "MET",
            "department": "CSEN",
            "role2": "Coordinator",
            "schedule": {
                "_id": "5fe4bd6d9f938f6360981ea6",
                "saturday": [],
                "sunday": [],
                "monday": [],
                "tuesday": [],
                "wednesday": [],
                "thursday": []
            },
            "__v": 0
    },
    {
            "first_login": true,
            "day_off": "Saturday",
            "leave_balance": 2.5,
            "courses": [],
            "accidental_leave": 0,
            "_id": "5fe4dbb6bb036e7230d8d82f",
            "id": "ac-5",
            "name": "secondta",
            "email": "ac5@gmail.com",
            "salary": 2000,
            "gender": true,
            "office_location": "C1.101",
            "role1": "instructor",
            "faculty": "MET",
            "department": "CSEN",
            "role2": "",
            "schedule": {
                "_id": "5fe4dbb6bb036e7230d8d82e",
                "saturday": [],
                "sunday": [],
                "monday": [],
                "tuesday": [],
                "wednesday": [],
                "thursday": []
            },
            "__v": 0
    }]
```

Functionality: View the day off of all the staff in
Route: /viewDayOff
Request type: GET
Request body: optional {`"member_id"`:`"ac-3"`}

Parameters:
Response: list of staff members and their corresponding days off (besides Friday). Example**:**

```
(Staff Member ID: ac-1, Day Off: Saturday)
(Staff Member ID: ac-2, Day Off: Saturday)
(Staff Member ID: ac-3, Day Off: Saturday)
(Staff Member ID: ac-4, Day Off: Saturday)
(Staff Member ID: ac-5, Day Off: Saturday)
(Staff Member ID: ac-8, Day Off: Saturday)
or
(Staff Member ID: ac-3, Day Off: Saturday)
```

Functionality: View all the requests \change day off/leave" sent by staff members in his/her department.
Route: /viewRequests
Request type: GET
Request body:

Parameters:
Response: [

```
    {
        "replacement_id": [],
        "status": "pending",
        "_id": "5fe628628e12af2bc8a4717a",
        "sending_staff": "ac-4",
        "receiving_staff": "ac-8",
        "date_sent": "2020-12-25T17:58:58.349Z",
        "request_date": "2020-12-27T00:00:00.000Z",
        "request_type": "replacement",
        "reason": "i want to take a break",
        "req_slot": {
            "replacement": false,
            "_id": "5fe628628e12af2bc8a4717b",
            "id": 2,
            "type": "tut",
            "course_id": "CSEN704"
        },
        "course_id": "CSEN704",
        "__v": 0
    },
    {
        "replacement_id": [],
        "status": "pending",
```

        "_id": "5fe62fa2417d6c54bc3e7475",
        "sending_staff": "ac-4",
        "receiving_staff": "ac-8",
        "request_type": "slot linking",
        "reason": "i want to take this slot",
        "date_sent": "2020-12-25T18:29:54.423Z",
        "course_id": "CSEN704",
        "req_slot": {
            "replacement": false,
            "_id": "5fe62fa2417d6c54bc3e7476",
            "id": 2,
            "type": "tut",
            "course_id": "CSEN704",
            "date": "2020-12-27T00:00:00.000Z"
        },
        "request_date": "2020-12-27T00:00:00.000Z",
        "__v": 0
    },
    {
        "replacement_id": [],
        "status": "pending",
        "_id": "5fe630c4f2cab03580f7c0d5",
        "sending_staff": "ac-4",
        "receiving_staff": "ac-1",
        "date_sent": "2020-12-25T18:34:44.375Z",
        "request_type": "change day off",
        "reason": "i want to take monday off",
        "request_date": "2020-12-27T00:00:00.000Z",
        "new_day_off": "monday",
        "__v": 0
    },
    {
        "replacement_id": [],
        "status": "cancelled",
        "_id": "5fe631c2b512c7327c1c340f",
        "sending_staff": "ac-4",
        "receiving_staff": "ac-1",
        "request_type": "annual",
        "reason": "i want to take a break",
        "date_sent": "2020-12-25T18:38:58.457Z",
        "request_date": "2020-12-27T00:00:00.000Z",
        "__v": 0
    },
    {
        "replacement_id": [],
        "status": "pending",
        "_id": "5fe63645b512c7327c1c3419",
        "sending_staff": "ac-4",

```
        "receiving_staff": "ac-1",
        "request_type": "sick",
        "date_sent": "2020-12-25T18:58:13.761Z",
        "request_date": "2020-12-27T00:00:00.000Z",
        "document": "linktodocneeded",
        "__v": 0
    }
]
```

Functionality: Accept a request
Route: /acceptRequest
Request type: POST
Request body: {"request_id": "5fe63645b512c7327c1c3419"}

Parameters:
Response: confirmation message. Example:

```
Request 5fe63645b512c7327c1c3419 has been successfully accepted
```

Functionality: Reject a request, and optionally leave a comment as to why this request was rejected.
Route: /rejectRequest
Request type: POST
Request body: {"request_id": "5fe630c4f2cab03580f7c0d5"}

Parameters:
Response: confirmation message. Example:

```
 Request 5fe630c4f2cab03580f7c0d5 has been rejected.
```

Functionality: View the coverage of each course in his/her department.
Route: /viewCourseCoverage
Request type: GET
Request body: {"course_id":"csen704"}

Parameters:
Response: ratio of course slots taken by staff members. Example:

```
The total coverage of CSEN704 is 0.2
```

Functionality: View teaching assignments (which staff members teach which slots) of courses offered by his department
Route: /viewTeachingAssignments
Request type: GET
Request body: {"courseID":"csen704"}

Parameters:
Response: slots assigned in a course. Example:

Assignments for csen704:

[{"staff_id":"ac-1","staff_name":"firstac","day_of_week":"Sunday","assignment":{"replacement":false,"_id":"5fe50d00071c316f0ccd146f","id":3,"type":"tut","location_id":"C1.101","course_id":"csen704","group":"t16"}},{"staff_id":"ac-1","staff_name":"firstac","day_of_week":"Sunday","assignment":{"replacement":false,"_id":"5fe50d00071c316f0ccd1470","id":3,"type":"tut","location_id":"C1.101","course_id":"csen704","group":"t16"}}]

INSTRUCTOR

Functionality: View the coverage of course(s) he/she is assigned to
Route: /instructor/viewCoverage
Request type: POST
Request body: {"courseID":"csen704"}

Parameters:
Response: ratio of the course covered. Example:

```
The total coverage is 0.2
```

Functionality: View the slots' assignment of course(s) he/she is assigned to.
Route: /instructor/viewSlots
Request type: POST
Request body: {"courseID":"csen704"}

Parameters:
Response: slots in the course and whether they are taken (assigned) or not. Example:

```
[    {
        "taken": false,
        "replacement": false,
        "_id": "5fe4f6d06e920c74d412f295",
        "id": 2,
        "type": "tut",
        "date": null,
        "location_id": "C1.101",
        "course_id": "csen704",
        "group": "t16",
        "day": "sunady"
    },    {
        "taken": false,
        "replacement": false,
        "_id": "5fe4f6ff6e920c74d412f297",
        "id": 1,
        "type": "tut",
        "date": null,
        "location_id": "C1.101",
        "course_id": "csen704",
        "group": "t16",
        "day": "monday"
    },    {
        "taken": true,
        "replacement": false,
        "_id": "5fe4f7126e920c74d412f299",
        "id": 3,
        "type": "tut",
        "date": null,
        "location_id": "C1.101",
```

```json
        "course_id": "csen704",
        "group": "t16",
        "day": "sunday"
    },    {
        "taken": true,
        "replacement": false,
        "_id": "5fe4f7166e920c74d412f29b",
        "id": 3,
        "type": "tut",
        "date": null,
        "location_id": "C1.101",
        "course_id": "csen704",
        "group": "t16",
        "day": "sunday"
    },    {
        "taken": false,
        "replacement": false,
        "_id": "5fe4f77d6e920c74d412f29d",
        "id": 3,
        "type": "lecture",
        "date": null,
        "location_id": "C1.101",
        "course_id": "csen704",
        "group": "t16",
        "day": "wednesday"
    }]
```

Functionality: View all the staff in his/her department along with their profiles.
Route: /instructor/viewProfilesDepartment
Request type: POST
Request body:

Parameters:
Response: instructor profiles for all instructors in that department. Example:

```json
[    {          "name": "firstac",
        "email": "ac1@gmail.com",
        "office_location": "C1.101",
        "role1": "instructor",
        "role2": "hod",
        "courses": ["csen704"],
        "day_off": "Saturday",
        "info": "studied in some university. i love icecream"    },
    {"name": "secondac",
        "email": "ac2@gmail.com",
        "office_location": "C1.101",
        "role1": "instructor",
        "role2": "",
```

```
        "courses": [],
        "day_off": "Saturday"      },
    {        "name": "firstta",
        "email": "ta1@gmail.com",
        "office_location": "C1.101",
        "role1": "instructor",
        "role2": "",
        "courses": ["CSEN704"],
        "day_off": "Saturday"},
    {        "name": "secondta",
        "email": "ta2@gmail.com",
        "office_location": "C1.101",
        "role1": "ta",
        "role2": "Coordinator",
        "courses": ["csen704"],
        "day_off": "Saturday"      },
    {        "name": "secondta",
        "email": "ac5@gmail.com",
        "office_location": "C1.101",
        "role1": "instructor",
        "role2": "",
        "courses": [],
        "day_off": "Saturday"      },
    { "name": "thirdta",
        "email": "ta3@gmail.com",
        "office_location": "C1.101",
        "role1": "ta",
        "role2": "",
        "courses": [],
        "day_off": "Saturday"      }]
```

Functionality: View all the staff in his/her course along with their profiles.
Route: /instructor/viewProfilesCourse
Request type: POST
Request body: {"courseID":"csen704"}

Parameters:
Response: instructor profiles for all instructors teaching that course. Example:

```
[    {        "name": "firstac",
        "email": "ac1@gmail.com",
        "office_location": "C1.101",
        "role1": "instructor",
        "role2": "hod",
        "courses": ["csen704"],
        "day_off": "Saturday",
        "info": "studied in some university. i love icecream"      },
    {        "name": "secondta",
        "email": "ta2@gmail.com",
```

```
        "office_location": "C1.101",
        "role1": "ta",
        "role2": "Coordinator",
        "courses": ["csen704"],
        "day_off": "Saturday"     }]
```

Functionality: Assign an academic member to an unassigned slots in course(s) he/she is assigned to.
Route: /instructor/assignToSlot
Request type: POST
Request body: `{"memID":"ac-4", "courseID":"csen704","id":2,"type":"tut","date":"",`

`"location_id":"C1.101","course_id":"CSEN704","group":"t16","day":"sunday"}`
Parameters:
Response: confirmation or error message. Example:
```
Added Successfully
```
Or
```
The TA isn't free in this slot
```

Functionality: Update assignment of academic member in course(s) he/she is assigned to.
Route: /instructor/updateCourseMem
Request type: POST
Request body: `{"memID":"ac-4","courseID":"CSEN704", "targetCourseID":"csen103"}`

Parameters:
Response: confirmation message

Functionality: delete assignment of academic member in course(s) he/she is assigned to.
Route: /instructor/deleteCourseMem
Request type: POST
Request body: `{"memID":"ac-4","courseID":"csen103"}`

Parameters:
Response: confirmation message

Functionality: Remove an assigned academic member in course(s) he/she is assigned to
Route: /instructor/removeCourseMem
Request type: POST
Request body: `{"memID":"ac-4","courseID":"csen103"}`

Parameters:
Response: confirmation message

Functionality: Assign an academic member in each of his/her course(s) to be a course coordinator.
Route: /instructor/assignCoordinator
Request type: POST
Request body: `{"memID":"ac-4", "courseID":"csen704"}`

Parameters:
Response: confirmation message. Example: `Updated the role successfully!`

HR

Functionality: Add a location
Route: /hr/addLocation
Request type: POST
Request body: {"location_id": "c3.102","location_type":"tutorial","location_capacity":25}

Parameters:
Response: confirmation and the new entry made. Example:

```
added : {
taken: 0,
_id: 5fe5c1693bebcd205c27a53d,
id: 'c3.102',
type: 'tutorial',
__v: 0}
```

Functionality: Update a location
Route: /hr/addLocation
Request type: POST
Request body: {"loc_id": "c3.102","location_type":"hall","capacity":35}

Parameters:
Response: confirmation and the updated entry. Example:

```
updated to: {
taken: 0,
_id: 5fe5c1693bebcd205c27a53d,
id: 'c3.102',
type: 'hall',
__v: 0,
capacity: 35}
```

Functionality: delete a location
Route: /hr/deleteLocation
Request type: POST
Request body: {"loc_id": "c3.102"}

Parameters:
Response: confirmation and the updated entry. Example:

```
deleted : {
taken: 0,
_id: 5fe5c1693bebcd205c27a53d,
id: 'c3.102',
type: 'hall',
__v: 0,
capacity: 35}
```

Functionality: add a faculty
Route: /hr/addFaculty
Request type: POST
Request body: {"name":"iet","dep_id":"netw", "dep_name":"networks","course_id":"netw101"}

Parameters:

Response: confirmation and the added entry. Example:

```
added : {_id: 5fe5c72375c0985e105c0ef6,
name: 'iet',
departments: [
{_id: 5fe5c72375c0985e105c0ef7,
id: 'netw',
name: 'networks',
courses: [Array]
}],_
_v: 0}
```

Functionality: update a faculty (change its name)
Route: /hr/updateFaculty
Request type: POST
Request body: {"faculty_name":"iet", "faculty_name_update":"iet2"}

Parameters:

Response: confirmation and the updated entry. Example:

```
updated to: {_id: 5fe5c72375c0985e105c0ef6,
name: 'iet2',
departments: [
{_id: 5fe5c72375c0985e105c0ef7,
id: 'netw',
name: 'networks',
courses: [Array]
}],
__v: 4}
```

Functionality: delete a faculty
Route: /hr/deleteFaculty
Request type: POST
Request body: {"faculty_name":"iet2"}

Parameters:

Response: confirmation and the updated entry. Example:

```
deleted : {_id: 5fe5c72375c0985e105c0ef6,
name: 'iet2',
departments: [{_id: 5fe5c72375c0985e105c0ef7,
id: 'netw',
name: 'networks',
courses: [Array]}],__v: 4}
```

Functionality: add a department under a faculty
Route: /hr/adddepartment
Request type: POST
Request body: {"faculty_name":"iet","id":"elct", "name":"electricity","course_id":"elct101"}

Parameters:

Response: confirmation and the added entry. Example:

```
added : {_id: 5fe5c89b75c0985e105c0ef9,
id: 'elct',
name: 'electricity',
courses: [
{coverage: 1,
instructor_ids: [],
academic_member_ids: [],
_id: 5fe5c89b75c0985e105c0efa,
id: 'elct101',
course_schedule: []}]}
```

Functionality: update a department under a faculty (change head id or department name)
Route: /hr/updateDepartment
Request type: POST
Request body: { "faculty_name":"iet","dep_id":"elct" ,"head_id":"ac-5","name":"elct2" }

Parameters:

Response: confirmation and the updated entry. Example:

```
updated to: {_id: 5fe5c89b75c0985e105c0ef9,
id: 'elct',
name: 'elct2',
courses: [
{coverage: 1,
instructor_ids: [],
academic_member_ids: [],
_id: 5fe5c89b75c0985e105c0efa,
id: 'elct101',
course_schedule: []}],
head_id: 'ac-5'}
```

Functionality: delete a department under a faculty
Route: /hr/deleteDepartment
Request type: POST
Request body: { "faculty_name":"iet","dep_id":"elct"}

Parameters:

Response: confirmation and the removed entry. Example:

```
deleted : {_id: 5fe5c89b75c0985e105c0ef9,
```

```
id: 'elct',
name: 'elct2',
courses: [{coverage: 1,
instructor_ids: [],
academic_member_ids: [],
_id: 5fe5c89b75c0985e105c0efa,
id: 'elct101',
course_schedule: []}],
head_id: 'ac-5'}
```

Functionality: add a course under a department
Route: /hr/addCourse
Request type: POST
Request body:
{"faculty_name":"iet","dep_id":"elct", "id":"circ101","credit_hours":6,"coverage":20}

Response: confirmation and the department with the new course shown. Example:

```
added : {_id: 5fe5c89b75c0985e105c0ef9,
id: 'elct',
name: 'electricity',
courses: [{
coverage: 1,
instructor_ids: [],
academic_member_ids: [],
_id: 5fe5c89b75c0985e105c0efa,
id: 'elct101',
course_schedule: []},
{coverage: 20,
instructor_ids: [],
academic_member_ids: [],
_id: 5fe5d03275c0985e105c0efb,
id: 'circ101',
credit_hours: 6,
coordinator_id: '',
course_schedule: []}]}
```

Functionality: update a course under a department (change its credit hours)
Route: /hr/updateCourse
Request type: POST
Request body: {"faculty_name":"iet", "dep_id":"elct","course_id":"circ101","credit_hours":8}

Response: confirmation and the department with the updated course shown. Example:

```
updated to: {
_id: 5fe5c89b75c0985e105c0ef9,
id: 'elct',
name: 'electricity',
courses: [
```

```
{coverage: 1,
instructor_ids: [],
academic_member_ids: [],
_id: 5fe5c89b75c0985e105c0efa,
id: 'elct101',
course_schedule: []
},
{coverage: 20,
instructor_ids: [],
academic_member_ids: [],
_id: 5fe5d03275c0985e105c0efb,
id: 'circ101',
credit_hours: 8,
coordinator_id: '',
course_schedule: []}]}
```

Functionality: delete a course under a department
Route: /hr/deletecourse
Request type: POST
Request body: {"faculty_name":"iet", "dep_id":"elct","course_id":"circ101"}

Response: confirmation and the deleted course shown. Example:

```
deleted : {
coverage: 20,
instructor_ids: [],
academic_member_ids: [],
_id: 5fe5d03275c0985e105c0efb,
id: 'circ101',
credit_hours: 8,
coordinator_id: '',
course_schedule: []
}
```

Functionality: HR can add a new staff member to the system
Route: /hr/addStaff
Request type: POST
Request body: {"name":"thirdta",

```
    "gender":false,
    "salary":6000,
    "office_location":"C1.101",
    "role1":"ta",
    "faculty":"MET",
    "dept_id":"CSEN",
    "email":"ta3@gmail.com",
```

```
      "password":"pass123"}
```
Parameters:

Response: confirmation and the new entry made. Example:

```
added : {
first_login: true,
day_off: 'Saturday',
leave_balance: 2.5,
courses: [],
accidental_leave: 0,
_id: 5fe5bf863bebcd205c27a53a,
id: 'ac-8',
name: 'thirdta',
email: 'ta3@gmail.com',
salary: 6000,
gender: false,
office_location: 'C1.101',
password: '$2b$10$E30o3IU5Qc1cRCjofvviB.nZU8G5mhMiIybZlRNu8rMo5xyAE2QkO',
role1: 'ta',
faculty: 'MET',
department: 'CSEN',
role2: '',
schedule: {
_id: 5fe5bf863bebcd205c27a539,
saturday: [],
sunday: [],
monday: [],
tuesday: [],
wednesday: [],
thursday: []
},
__v: 0}
```

Functionality: Update already existing staff members.
Route: /hr/updatestaff
Request type: POST

Request body: {"id":"ac-8", "role1":"instructor","office_location":"C1.101"}

Response: confirmation message

Functionality: delete already existing staff members.
Route: /hr/deletestaff
Request type: POST
Request body: {"id":"ac-8"}

Response: confirmation message

Functionality: Manually add a missing sign in record of a staff member except for himself/herself
Route: /hr/addmissingSignIn
Request type: POST
Request body: { `"id":"ac-1"`,   `"signIn": "2020-12-25T07:23:04.347+00:00"`}

Response: confirmation message

Functionality: Manually add a missing sign out record of a staff member except for himself/herself
Route: /hr/addmissingSignOut
Request type: POST
Request body: { `"id":"ac-1"`,   `"signOut": "2020-12-25T07:59:04.347+00:00"`}

Response: confirmation message

Functionality: View any staff member attendance record.
Route: /hr/viewattendanceRec
Request type: GET
Request body: {`"id":"ac-1"`}

Response: attendance records of given staff member. Example:

```
[ {        "status": "attended",
        "missing_hours": 28072.207,
        "_id": "5fe593585449fe665cad4987",
        "day": "2020-12-25T07:23:04.347Z",
        "signs": [
            {"_id": "5fe59bd0cc444b3a884b7d45",
                "signIn": "2020-12-25T07:23:04.347Z",
                "signOut": "2020-12-25T07:59:12.140Z"}
        ]    }]
```

Functionality: View staff members with missing hours
Route: /hr/viewStaffmemberMissinghours
Request type: POST
Request body:

Response: ids of staff members with missing hours. Example: [`"ac-1"`]

Functionality: View staff members with missing days
Route: /hr/viewStaffmemberMissingdays
Request type: POST
Request body:

Response: ids of staff members with missing days. Example: [`"ac-1"`]

Functionality: Update the salary of a staff member.

Route: /hr/updateSalary
Request type: POST
Request body: {"id":"ac-1", "salary":700000000}

Response: confirmation message. Example: salary updated successfully

Academic Member:

Functionality: View their schedule.
Route: /academicMember/viewSchedule
Request type: GET
Request body:
Parameters:
Response: { "error": "Here is your schedule with all your teaching activities.",

```
    "schedule": {
        "_id": "5fe4bd6d9f938f6360981ea6",
        "saturday": [],
        "sunday": [
            {    "replacement": false,
                "_id": "5fe6261130dbaf67b8607bdb",
                "id": 2,
                "type": "tut",
                "location_id": "C1.101",
                "course_id": "CSEN704",
                "group": "t16"              }          ],
        "monday": [  {
                "replacement": false,
                "_id": "5fe6263130dbaf67b8607bde",
                "id": 1,
                "type": "tut",
                "location_id": "C1.101",
                "course_id": "CSEN704",
                "group": "t16"}          ],
        "tuesday": [],
        "wednesday": [],
        "thursday": []      }}
```

Functionality: view sent replacement requests
Route: /academicMember/viewSendReplacementRequest
Request type: GET
Request body:
Parameters:
Response: {

```
    "error": "Here are all your send replacements requests.",
    "requests": [
        {            "replacement_id": [],
            "status": "pending",
            "_id": "5fe628628e12af2bc8a4717a",
            "sending_staff": "ac-4",
            "receiving_staff": "ac-8",
            "date_sent": "2020-12-25T17:58:58.349Z",
```

```
            "request_date": "2020-12-27T00:00:00.000Z",
            "request_type": "replacement",
            "reason": "i want to take a break",
            "req_slot": {
                "replacement": false,
                "_id": "5fe628628e12af2bc8a4717b",
                "id": 2,
                "type": "tut",
                "course_id": "CSEN704"
            },
            "course_id": "CSEN704",
            "__v": 0          }      ]}
```

Functionality: view recieved replacement requests
Route: /academicMember/viewReceivedReplacementRequest
Request type: PUT
Request body: {"request_id":"5fe628628e12af2bc8a4717b","req_status": "accepted"} (optional)

Parameters:
Response: {

```
    "error": "Here are all your received replacements requests.",
    "requests": [
        {"replacement_id": [],
            "status": "pending",
            "_id": "5fe628628e12af2bc8a4717a",
            "sending_staff": "ac-4",
            "receiving_staff": "ac-8",
            "date_sent": "2020-12-25T17:58:58.349Z",
            "request_date": "2020-12-27T00:00:00.000Z",
            "request_type": "replacement",
            "reason": "i want to take a break",
            "req_slot": {
                "replacement": false,
                "_id": "5fe628628e12af2bc8a4717b",
                "id": 2,
                "type": "tut",
                "course_id": "CSEN704"
            },
            "course_id": "CSEN704",
            "__v": 0          }      ]}
```

Functionality: send replacement requests
Route: /academicMember/SendReplacementRequest
Request type: POST
Request body: {

```
"receiving_staff":"ac-8",
"request_date":"2020-12-27",
"reason":"i want to take a break",
"course_id":"csen704",
"req_slot":{"id":2,"type":"tut","course_id":"csen704"}    }
```

Parameters:
Response: confirmation message

Functionality: send a slot linking request
Route: /academicMember/slotLinkingRequest
Request type: POST
Request body: {

```
"request_date":"2020-12-27",
"reason":"i want to take this slot",
"course_id":"CSEN704",
"req_slot":{"id":"2","type":"tut","course_id":"CSEN704","date":"2020-12-27"}
}
```
Parameters:
Response: confirmation message

Functionality: send a request to change day off
Route: /academicMember/changeDayOff
Request type: PUT
Request body: {

```
"request_date":"2020-12-27",
"reason":"i want to take monday off",
"new_day_off":"monday"
}
```
Parameters:
Response: confirmation message

Functionality: send a leave request
Route: /academicMember/sendLeaveRequest
Request type: POST
Request body:

```
Annual:

{

"request_date":"2020-12-27",
```

```
"reason":"i want to take an annual leave",
"replacement_id":["ac-8"], (optional field, only if there is already an accepted replacement)
"request_type":"annual"
}
```
Or

```
{
"request_date":"2020-12-27",
"request_type":"sick",
"document":"linktodocneeded"
}
```
Or

```
{
"request_date":"2020-12-27",
"request_type":"accidental"
}
```
OR
```
{
"request_date":"2020-12-27",
"request_type":"maternity",
"document":"linktodocumentneeded"
}
```
Or

```
{
"request_date":"2020-12-26",
"reason":"i want to take a break",
"request_type":"compensation",
"compensation_date":"2020-12-28"
}
```
Parameters:
Response: confirmation message

Functionality: View the status of all submitted requests.
Route: /academicMember/viewAllRequests
 Request type: GET
Request body:
Parameters:
Response: {

```
    "error": "These are all your submitted requests.",
    "requests": [
        {
            "replacement_id": [],
            "status": "pending",
            "_id": "5fe628628e12af2bc8a4717a",
            "sending_staff": "ac-4",
```

```json
        "receiving_staff": "ac-8",
        "date_sent": "2020-12-25T17:58:58.349Z",
        "request_date": "2020-12-27T00:00:00.000Z",
        "request_type": "replacement",
        "reason": "i want to take a break",
        "req_slot": {
            "replacement": false,
            "_id": "5fe628628e12af2bc8a4717b",
            "id": 2,
            "type": "tut",
            "course_id": "CSEN704"
        },
        "course_id": "CSEN704",
        "__v": 0
    },
    {
        "replacement_id": [],
        "status": "accepted",
        "_id": "5fe62fa2417d6c54bc3e7475",
        "sending_staff": "ac-4",
        "receiving_staff": "ac-8",
        "request_type": "slot linking",
        "reason": "i want to take this slot",
        "date_sent": "2020-12-25T18:29:54.423Z",
        "course_id": "CSEN704",
        "req_slot": {
            "replacement": false,
            "_id": "5fe62fa2417d6c54bc3e7476",
            "id": 2,
            "type": "tut",
            "course_id": "CSEN704",
            "date": "2020-12-27T00:00:00.000Z"
        },
        "request_date": "2020-12-27T00:00:00.000Z",
        "__v": 0
    },
    {
        "replacement_id": [],
        "status": "rejected",
        "_id": "5fe630c4f2cab03580f7c0d5",
        "sending_staff": "ac-4",
        "receiving_staff": "ac-1",
        "date_sent": "2020-12-25T18:34:44.375Z",
        "request_type": "change day off",
        "reason": "i want to take monday off",
        "request_date": "2020-12-27T00:00:00.000Z",
        "new_day_off": "monday",
        "__v": 0
```

```
    },
    {
        "replacement_id": [],
        "status": "cancelled",
        "_id": "5fe631c2b512c7327c1c340f",
        "sending_staff": "ac-4",
        "receiving_staff": "ac-1",
        "request_type": "annual",
        "reason": "i want to take a break",
        "date_sent": "2020-12-25T18:38:58.457Z",
        "request_date": "2020-12-27T00:00:00.000Z",
        "__v": 0
    },
    {
        "replacement_id": [],
        "status": "accepted",
        "_id": "5fe63645b512c7327c1c3419",
        "sending_staff": "ac-4",
        "receiving_staff": "ac-1",
        "request_type": "sick",
        "date_sent": "2020-12-25T18:58:13.761Z",
        "request_date": "2020-12-27T00:00:00.000Z",
        "document": "linktodocneeded",
        "__v": 0
    }
  ]
}
```

Functionality: View the of their accepted submitted requests.
Route: /academicMember/viewAcceptedRequests
 Request type: GET
Request body:
Parameters:
Response: {

```
    "error": "These are all your accepted requests.",
    "requests": [
        {
            "replacement_id": [],
            "status": "accepted",
            "_id": "5fe62fa2417d6c54bc3e7475",
            "sending_staff": "ac-4",
            "receiving_staff": "ac-8",
            "request_type": "slot linking",
            "reason": "i want to take this slot",
            "date_sent": "2020-12-25T18:29:54.423Z",
            "course_id": "CSEN704",
```

```
            "req_slot": {
                "replacement": false,
                "_id": "5fe62fa2417d6c54bc3e7476",
                "id": 2,
                "type": "tut",
                "course_id": "CSEN704",
                "date": "2020-12-27T00:00:00.000Z"
            },
            "request_date": "2020-12-27T00:00:00.000Z",
            "__v": 0
        },
        {
            "replacement_id": [],
            "status": "accepted",
            "_id": "5fe63645b512c7327c1c3419",
            "sending_staff": "ac-4",
            "receiving_staff": "ac-1",
            "request_type": "sick",
            "date_sent": "2020-12-25T18:58:13.761Z",
            "request_date": "2020-12-27T00:00:00.000Z",
            "document": "linktodocneeded",
            "__v": 0
        }
    ]
}
```

Functionality: View the of their rejected submitted requests.
Route: /academicMember/viewRejectedRequest
 Request type: GET
Request body:
Parameters:
Response: {

```
    "error": "These are all your rejected requests.",
    "requests": [
        {
            "replacement_id": [],
            "status": "rejected",
            "_id": "5fe630c4f2cab03580f7c0d5",
            "sending_staff": "ac-4",
            "receiving_staff": "ac-1",
            "date_sent": "2020-12-25T18:34:44.375Z",
            "request_type": "change day off",
            "reason": "i want to take monday off",
            "request_date": "2020-12-27T00:00:00.000Z",
            "new_day_off": "monday",
            "__v": 0
```

```
            }
        ]
    }
```

Functionality: View the of their pending submitted requests.
Route: /academicMember/viewPendingRequest
 Request type: GET
Request body:
Parameters:
Response: {

```
    "error": "These are all your pending requests.",
    "requests": [
        {
            "replacement_id": [],
            "status": "pending",
            "_id": "5fe628628e12af2bc8a4717a",
            "sending_staff": "ac-4",
            "receiving_staff": "ac-8",
            "date_sent": "2020-12-25T17:58:58.349Z",
            "request_date": "2020-12-27T00:00:00.000Z",
            "request_type": "replacement",
            "reason": "i want to take a break",
            "req_slot": {
                "replacement": false,
                "_id": "5fe628628e12af2bc8a4717b",
                "id": 2,
                "type": "tut",
                "course_id": "CSEN704"
            },
            "course_id": "CSEN704",
            "__v": 0
        },
        {
            "replacement_id": [],
            "status": "pending",
            "_id": "5fe62fa2417d6c54bc3e7475",
            "sending_staff": "ac-4",
            "receiving_staff": "ac-8",
            "request_type": "slot linking",
            "reason": "i want to take this slot",
            "date_sent": "2020-12-25T18:29:54.423Z",
            "course_id": "CSEN704",
            "req_slot": {
                "replacement": false,
                "_id": "5fe62fa2417d6c54bc3e7476",
                "id": 2,
```

```
                    "type": "tut",
                    "course_id": "CSEN704",
                    "date": "2020-12-27T00:00:00.000Z"
                },
                "request_date": "2020-12-27T00:00:00.000Z",
                "__v": 0
            },
            {
                "replacement_id": [],
                "status": "pending",
                "_id": "5fe630c4f2cab03580f7c0d5",
                "sending_staff": "ac-4",
                "receiving_staff": "ac-1",
                "date_sent": "2020-12-25T18:34:44.375Z",
                "request_type": "change day off",
                "reason": "i want to take monday off",
                "request_date": "2020-12-27T00:00:00.000Z",
                "new_day_off": "monday",
                "__v": 0
            },
            {
                "replacement_id": [],
                "status": "pending",
                "_id": "5fe631c2b512c7327c1c340f",
                "sending_staff": "ac-4",
                "receiving_staff": "ac-1",
                "request_type": "annual",
                "reason": "i want to take a break",
                "date_sent": "2020-12-25T18:38:58.457Z",
                "request_date": "2020-12-27T00:00:00.000Z",
                "__v": 0
            }
        ]
}
```

Functionality: Cancel a still pending request or a request whose day is yet to come.
Route: /academicMember/cancelRequest
 Request type: PUT
Request body: {"request_id":"5fe631c2b512c7327c1c340f"}

Parameters:
Response: confirmation message. Example: {

    "error": "your request has been cancelled"
}

Academic Coordinator:

Functionality: View "slot linking" request(s) from academic members linked to his/her course.
Route: /coordinator/viewSlotLinkingRequests
 Request type: GET
Request body:
Parameters:
Response: a list of all slot linking requests from other academic members in that course

```
[    {    "replacement_id": [],
        "status": "pending",
        "_id": "5fe62fa2417d6c54bc3e7475",
        "sending_staff": "ac-4",
        "receiving_staff": "ac-8",
        "request_type": "slot linking",
        "reason": "i want to take this slot",
        "date_sent": "2020-12-25T18:29:54.423Z",
        "course_id": "CSEN704",
        "req_slot": {
            "replacement": false,
            "_id": "5fe62fa2417d6c54bc3e7476",
            "id": 2,
            "type": "tut",
            "course_id": "CSEN704",
            "date": "2020-12-27T00:00:00.000Z"
        },
        "request_date": "2020-12-27T00:00:00.000Z",
        "__v": 0}]
```

Functionality: Accept "slot linking" requests from academic members linked to his/her course
Route: /coordinator/acceptSlotLinkingRequests
 Request type: POST
Request body: {"request_id":"5fe62fa2417d6c54bc3e7475"}

Parameters:
Response: confirmation message.
Example:Request 5fe62fa2417d6c54bc3e7475 has been successfully accepted.

Functionality: reject "slot linking" requests from academic members linked to his/her course
Route: /coordinator/rejectSlotLinkingRequest
Request type: POST
Request body: {"request_id":"5fe62fa2417d6c54bc3e7475"}

Parameters:
Response: confirmation message. Example:
Request 5fe62fa2417d6c54bc3e7475 has been rejected

Functionality: Add course slot(s) in his/her course
Route: /coordinator/addSlots
Request type: POST
Request body: {

```
"id":5,
"type":"lecture",
"date":"",
"location_id":"C1.101",
"courseID":"csen704",
"group":"t16",
"day":"tuesday"
}
```
Parameters:
Response: confirmation message

Functionality: update course slot(s) in his/her course
Route: /coordinator/updateSlot
Request type: POST
Request body: {

```
"id":5,
"type":"tutorial",
"date":"",
"location_id":"C1.101",
"course_id":"CSEN704",
"group":"t16",
"day":"tuesday"}
```
Parameters:
Response:confirmation message

Functionality: delete course slot(s) in his/her course
Route: /coordinator/deleteSlot
Request type: POST
Request body: {

```
"id":5,
"type":"tutorial",
"date":"",
"location_id":"C1.101",
"course_id":"CSEN704",
"group":"t16",
"day":"tuesday"}
```
Parameters:
Response: confirmation message