**JobWizard API Documentation**

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# Introduction

JobWizard is a program written specifically for SEN-210 to provide application-level functionality so that students can focus solely on UI development. The program can be run as a command-line application to be used with a desktop UI. However, it can also run as a web backend. In this case, it serves a REST API using the Labstack Echo package. Thus it does not require Apache or any other external web server/dispatcher.

The **job\_wizard** server is currently running on a virtual machine provided for us, **teaching.cmkl.ai** (103.153.118.223). It saves its data in an SQLite database on the server virtual machine. We use the **nginx** proxy server to allow the API to be called as **https** on the default port.

This document summarizes the API endpoints, providing information about their arguments and information returned. It also includes a discussion of the circumstances under which each one should be invoked.

The documentation below in some cases includes sample body text and/or responses. Please note that the actual values you get may differ as they will depend on the contents of the database and on previous calls.

# Register

**When to invoke this endpoint**

Invoke this endpoint to create a new user. All other API calls require a user email as one of their arguments, as a primitive form of authentication.

All arguments are required.

**HTTP Request Type:** POST

**Endpoint URL**

**https://teaching.cmkl.ai/api/register**

**Request Body**

**{**

**"email" : "martha@outlook.com",**

**"first" : "Martha",**

**"last" : "Marshall",**

**"phone" : "0620334567",**

**"education" : 3**

**}**

# Response (valid)

**{**

**"registered": "martha@outlook.com"**

**}**

# Comments

If you provide an email that duplicates an existing user, you will receive an error response, e.g.

**{**

**"error": "Email is not unique; user not created"**

**}**

# Empty required fields or invalid input (e.g. education that is not an integer between 0 and 4 inclusive) will also produce error responses.

# Create Job

**When to invoke this endpoint**

Invoke this endpoint to create a new job. All arguments are required.

**HTTP Request Type:** POST

**Endpoint URL**

**https://teaching.cmkl.ai/api/job/create**

**Request Body**

**{**

**"creator" : "sally@cmkl.ac.th",**

**"title" : "Q/A Trainee",**

**"description" : "Support the A1CE development effort by creating and running test plans, executing static analysis tools, etc.",**

**"min\_education" : 2,**

**"min\_experience" : 0,**

**"salary" : 22000**

**}**

# Response (valid)

**{**

**"created\_job": "00008"**

**}**

# Comments

If the creation is successful, the API returns the job ID of the newly created job. Otherwise you will get a response with a key of “error”. Errors can be caused by missing or invalid arguments. Note that there is no logic to prevent the creation of duplicate jobs with the exact same informaton.

# Search for Jobs

**When to invoke this endpoint**

Invoke this endpoint to get a list of all jobs in the database, or to select a subset of jobs based on various search criteria. Note that this endpoint returns a summary of the job information. You must call the **/search/detail** endpoint to see full information about a job.

**HTTP Request Type:** GET

**Endpoint URL**

**https://teaching.cmkl.ai/api/search**

**Request Arguments**

Since this is a GET request, the parameters are appended to the base URL.

|  |  |  |
| --- | --- | --- |
| **Parameter name** | **Required?** | **Meaning/use** |
| email | Yes | Email of the registered user making the request |
| posted | No | Posting date (yyyy-mm-dd); will return jobs posted on this date or more recently |
| experience | No | Positive integer; will return jobs that require this many years of experience, or less |
| education | No | Integer between 1 and 4 inclusive; will return jobs that require this level of education, or less. |
| salary | No | Positive integer less than 1 million; will return all jobs with this level of salary or more. |
| keyword | No | Single word to be matched against the title; currently this is case-sensitive |

# Example

**https://teaching.cmkl.ai/api/search?email=sally@cmkl.ac.th&education=2&salary=30000**

**Response (Valid)**

**[**

**{**

**"job\_id": "00002",**

**"title": "Back End Developer",**

**"is\_open": true,**

**"date\_posted": "2025-06-27"**

**},**

**{**

**"job\_id": "00004",**

**"title": "Executive Secretary",**

**"is\_open": true,**

**"date\_posted": "2025-07-02"**

**},**

**{**

**"job\_id": "00005",**

**"title": "Student Relations Officer",**

**"is\_open": true,**

**"date\_posted": "2025-07-02"**

**}**

**]**

# Comments

If there are no jobs that match the specified criteria, the endpoint will return a warning response.

**{**

**"warning": "No matching jobs found"**

**}**

The endpoint can return an error response if the parameters are incorrectly formatted, if the user email is missing, or if the specified user does not exist.

# Display Job Details

**When to invoke this endpoint**

Invoke this endpoint after a general search, a search for jobs you have created, or a search for jobs you have applied for, in order to retrieve all the information about a specific job.

**HTTP Request Type:** GET

**Endpoint URL**

**https://teaching.cmkl.ai/api/search/detail**

**Request Arguments**

Since this is a GET request, the parameters are appended to the base URL.

|  |  |  |
| --- | --- | --- |
| **Parameter name** | **Required?** | **Meaning/use** |
| email | Yes | Email of the registered user making the request |
| job\_id | Yes | Job identifier, e.g. “00007” |

# Example

**https://teaching.cmkl.ai/api/search/detail?email=sally@cmkl.ac.th&job\_id=00005**

# Response (valid)

**{**

**"job\_id": "00005",**

**"creator": "joe@cmkl.ac.th",**

**"title": "Student Relations Officer",**

**"description": "Assist students with planning study; gather feedback and complaints; interface with curriculum committee",**

**"min\_education": 2,**

**"min\_experience": 3,**

**"salary": 42000,**

**"is\_open": true,**

**"date\_posted": "2025-07-02"**

**}**

# Comments

Possible error conditions include parameters missing, invalid user email or non-existent or incorrectly formatted job ID.

# Search for Jobs Offered

**When to invoke this endpoint**

An employer can invoke this endpoint to see all the jobs they have created. Like the general search endpoint, this one returns a list of job summaries.

**HTTP Request Type:** GET

**Endpoint URL**

**https://teaching.cmkl.ai/api/search/offered**

**Request Arguments**

Since this is a GET request, the parameters are appended to the base URL.

|  |  |  |
| --- | --- | --- |
| **Parameter name** | **Required?** | **Meaning/use** |
| email | Yes | Email of the registered user making the request |

# Example

**https://teaching.cmkl.ai/api/search/detail?email=joe@cmkl.ac.th**

# Response (valid)

**[**

**{**

**"job\_id": "00003",**

**"title": "HR Director",**

**"is\_open": true,**

**"date\_posted": "2025-06-27"**

**},**

**{**

**"job\_id": "00005",**

**"title": "Student Relations Officer",**

**"is\_open": true,**

**"date\_posted": "2025-07-02"**

**}**

**]**

# Comments

The endpoint will return a warning if the user has not created any jobs.

**{**

**"warning": "No matching jobs found"**

**}**

# Possible error conditions include missing user email or invalid user email.

# Search for Jobs Applied For

**When to invoke this endpoint**

Invoke this endpoint to see what jobs a user has applied for.

**HTTP Request Type:** GET

**Endpoint URL**

**https://teaching.cmkl.ai/api/search/applied**

**Request Arguments**

Since this is a GET request, the parameters are appended to the base URL.

|  |  |  |
| --- | --- | --- |
| **Parameter name** | **Required?** | **Meaning/use** |
| email | Yes | Email of the registered user making the request |

# Example

**https://teaching.cmkl.ai/api/search/detail?email=sally@cmkl.ac.th**

# Response (valid)

**[**

**{**

**"job\_id": "00002",**

**"title": "Back End Developer",**

**"is\_open": true,**

**"date\_posted": "2025-06-27"**

**}**

**]**

# Comments

As with the other search endpoints, the endpoint will return a warning if there are no jobs found. Errors will be returned for a missing or invalid user email.

# Get Job Candidates

**When to invoke this endpoint**

Invoke this endpoint to get a list of the users who have applied for a particular job.

**HTTP Request Type:** GET

**Endpoint URL**

**https://teaching.cmkl.ai/api/search/candidates**

**Request Arguments**

Since this is a GET request, the parameters are appended to the base URL.

|  |  |  |
| --- | --- | --- |
| **Parameter name** | **Required?** | **Meaning/use** |
| email | Yes | Email of the registered user making the request |
| job\_id | Yes | Job identifier, e.g. “00005” |

# Example

**https://teaching.cmkl.ai/api/search/detail?email=joe@cmkl.ac.th&job\_id=00005**

# Response (valid)

**[**

**{**

**"email": "martha@gmail.com",**

**"name": "Martha Matthews",**

**"phone": "0920334567",**

**"applied\_date": "2025-10-08"**

**},**

**{**

**"email": "martha@outlook.com",**

**"name": "Martha Marshall",**

**"phone": "0750334567",**

**"applied\_date": "2025-10-08"**

**},**

**{**

**"email": "john@gmail.com",**

**"name": "John Smith",**

**"phone": "0987776565",**

**"applied\_date": "2025-10-08"**

**}**

**]**

# Comments

As with the other search endpoints, the endpoint will return a warning if there are no candidates found. Errors will be returned for a missing or invalid user email, an invalid job ID, or a job ID that was not created by the specified user.

# Modify Job

**When to invoke this endpoint**

Invoke this endpoint to change some characteristics of an existing job. This endpoint is also used to mark a job as filled. It can only be used by the person who created the specific job.

**HTTP Request Type:** PUT

**endpoint URL**

**https://teaching.cmkl.ai/api/job/modify**

**Request Body**

**{**

**"creator" : "joe@cmkl.ac.th",**

**"job\_id" : "00003",**

**"description" : "Do whatever the boss tells you",**

**"min\_education" : 3,**

**"min\_experience" : 2,**

**"salary" : 25000**

**}**

Note that aside from the **creator** and **job\_id** elements, attributes are all optional. The request should include only the fields that the creator wishes to change. You can also change the title of the job, which is not shown in the example above.

To indicate that a job has been filled, you must pass false for the **“is\_open”** property:

**Request Body to Fill a Job**

**{**

**"creator" : "joe@cmkl.ac.th",**

**"job\_id" : "00005",**

**"is\_open" : false**

**}**

# Response (valid)

**{**

**"modified\_job": "00003"**

**}**

# Comments

Errors that can be returned by this endpoint include mismatch between the specified creator and the actual creator of the job. Also, it is not possible to modify a job that has been filled.

**{**

**"error": "Job has already been filled"**

**}**

# Apply for a Job

**When to invoke this endpoint**

Invoke this endpoint to apply to a job (submit and application)

**HTTP Request Type:** POST

**Endpoint URL**

**https://teaching.cmkl.ai/api/job/submit**

**Request Body**

**{**

**"email" : "john@gmail.com",**

**"job\_id" : "00005"**

**}**

# Response (valid)

**{**

**"applied\_for\_job": "00005"**

**}**

# Comments

Currently the program does not prohibit you from applying to jobs that you have created.

If a user tries to apply to the same job more than once, the system will return an error:

**{**

**"error": "Attempt to create duplicate job application"**

**}**

An error will also be returned if the specified job has already been filled, that is, **is\_open** is false.

**{**

**"error": "Job has already been filled"**

**}**