VIRTUAL LEARNING ANALYTICS

Hackathon

October 25 | 9:00 am – 5:30 pm
Join us online

events.ctlt.ubc.ca/hackathon

UBC | THE UNIVERSITY OF BRITISH COLUMBIA

#HackUBC

Who We Are

- **Alison Myers:** Data Viz/Zoom Wizard, UBC Sauder School of Business

- **Will Engle:** Logistics and Zoom Help, Strategist, Open Education Initiatives; CTLT

- **Stoo Sepp**: Learning Designer, UBC Faculty of Education

- **Craig Thompson**: Research Analyst, UBC CTLT

- **Julie Wei:** Data Viz/Analysis, UBC Faculty of Arts

- **Justin Lee:** Data Viz/React/Node.js, UBC CTLT

- **Marko Prodanovic:** Data Viz/React/Node.js, UBC Sauder School of Business

Volunteers

- **Vineet Deo:** Lead Software Engineer/PHP/VueJs, Ritual Music

- **Quinn Hou:** Golang, backend engineer at Dapper Labs, working on NBA Topshot

- **Jordan Coblin:** Golang/Flow blockchain, Backend Engineer at Dapper Labs.

- **Carolina Pinzón:** Web developer at Shopify. Some of my skills are FE (React, CSS, JS), testing, and raising one eyebrow (but only the left one).

How the event will run.

Schedule

What are we building?

Outputs (entirely optional)

1. **Sharing:**
   a. Please put your work in [GitHub](#) (so that others can **see** your work)
   b. Please add a license to your project (so that others can **use** your work)

2. **Presentation (5 min max):**
   a. Slides must contain: Who you are, what your idea was, your contact info (optional)
   b. Demo your stuff
   c. Less is More

Canvas
Hackathon Site

The Canvas Site

- **https://canvas.ubc.ca/enroll/HECCXE**

- Designed to give you information for the weekend AND as a sandbox space for you to test your API calls

    - This is a UBC hosted course, not a true "Sandbox"

- **https://canvas.ubc.ca/courses/69306**

- If there's content types you would like to see added, just ask and we'll see what we can do!

API Best Practices and Guidelines

https://canvas.ubc.ca/courses/69306/files/10472079?module_item_id=2489640

API Overview

Script
(run on computer or
through web / mobile app)

Canvas API

What's the code behind it?

REST (Representational State Transfer) is the web standard that lets external sites ask about the 'state' of another (usually database information).
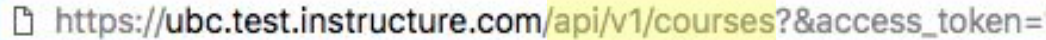
GET
POST
PUT
DELETE
(others too, depending on API standard)

REST is language-agnostic. Python? Swift? PHP? NodeJS? All good.

Courses   List   Expand   Raw

GET	/v1/courses	List your courses
GET	/v1/users/{user_id}/courses	List courses for a user
POST	/v1/accounts/{account_id}/courses	Create a new course
POST	/v1/courses/{course_id}/files	Upload a file
GET	/v1/courses/{course_id}/students	List students
GET	/v1/courses/{course_id}/users	List users in course
GET	/v1/courses/{course_id}/search_users	List users in course
GET	/v1/courses/{course_id}/recent_students	List recently logged in students
GET	/v1/courses/{course_id}/users/{id}	Get single user
POST	/v1/courses/{course_id}/preview_html	Preview processed html
GET	/v1/courses/{course_id}/activity_stream	Course activity stream
GET	/v1/courses/{course_id}/activity_stream/summary	Course activity stream summary
GET	/v1/courses/{course_id}/todo	Course TODO items
DELETE	/v1/courses/{id}	Delete/Conclude a course
GET	/v1/courses/{course_id}/settings	Get course settings
PUT	/v1/courses/{course_id}/settings	Update course settings

How a request works

Token gives you permission to make requests based on your level of access (student, instructor, admins)

1 Make request (below is example endpoint through chrome)

https://ubc.test.instructure.com/api/v1/courses?&access_token=

2 Wait...

3 Process what you get back.

[{"id":4271,"name":"[Analytics] Medieval History 109XC 🔴 ","account_id":2,"uuid":"jZnAzVYvo7KJhP0g4PtxeZqecFZzPhN2xyO1kXjI","start_at":"2018-02-01T08:00:00Z","grading_standard_id":null,"is_public":false,"course_code":"[Analytics] Medieval History 109XC ","default_view":"wiki","root_account_id":1,"enrollment_term_id":2,"end_at":"2018-12-29T08:00:00Z","public_syllabus":false,"public_syllabus_to_auth":false,"storage_quota_mb":4000,"is_public_to_auth_users":false,"apply_assignment_group_weights":true,"calendar":{"ics":"https://ubc.test.instructure.com/feeds/calendars/course_jZnAzVYvo7KJhP0g4PtxeZqecFZzPhN2xyO1kXjI.ics"},"time_zone":"America/Los_Angeles","blueprint":false,"sis_course_id":null,"integration_id":null,"enrollments":[{"type":"teacher","role":"TeacherEnrollment","role_id":4,"user_id":164739,"enrollment_state":"active"}],"hide_final_grades":true,"workflow_state":"available","restrict_enrollments_to_course_dates":false},{"id":25,"name":"Canvas 101","account_id":2,"uuid":"pKQUwrbDlliWUHedyUYQbZykqMRQ9fCdkghXbv9M","start_at":"2017-07-26T19:59:00Z","grading_standard_id":null,"is_public":false,"course_code":"Canvas 101","default_view":"wiki","root_account_id":1,"enrollment_term_id":2,"end_at":null,"public_syllabus":false,"public_syllabus_to_auth":false,"storage_quota_mb":5000,"is_public_to_auth_users":false,"apply_assignment_group_weights":true,"calendar":{"ics":"https://ubc.test.instructure.com/feeds/calendars/course_pKQUwrbDlliWUHedyUYQbZykqMRQ9fCdkghXbv9M.ics"},"time_zone":"America/Los_Angeles","blueprint":false,"enrollments":[{"type":"student","role":"StudentEnrollment","role_id":3,"user_id":164739,"enrollment_state":"active"}],"hide_final_grades":false,"workflow_state":"available","course_format":"online","restrict_enrollments_to_course_dates":false},{"id":4361,"name":"ETEC53365ATabRevision","account_id":13,"uuid":"aBJ3OezCanuX1s1zzW1dNePS78XGpVlEvlCXreCW","start_at":"2018-01-03T23:29:00Z","grading_standard_id":null,"is_public":false,"course_code":"ETEC533.65ATabRev","default_view":"syllabus","root_account_id":1,"enrollment_term_id":2,"end_at":null,"public_syllabus":false,"public_syllabus_to_auth":false,"storage_quota_mb":4000,"is_public_to_auth_users":false,"apply_assignment_group_weights":false,"calendar":{"ics":"https://ubc.test.instructure.com/feeds/calendars/course_aBJ3OezCanuX1s1zzW1dNePS78XGpVlEvlCXreCW.ics"},"time_zone":"America/Los_Angeles","blueprint":false,"sis_course_id":null,"integration_id":null,"enrollments":[{"type":"teacher","role":"TeacherEnrollment","role_id":4,"user_id":164739,"enrollment_state":"active"}],"hide_final_grades":false,"workflow_state":"unpublished","restrict_enrollments_to_course_dates":false},{"id":9842,"name":"F2F Canvas Orientation Apr2018","account_id":13,"uuid":"ZsxM0cjbc7zoIiKFgeuyzG9ngo2nJVe7UWpchU8v","start_at":"2018-01-03T18:39:00Z","grading_standard_id":null,"is_public":false,"course_code":"FoE.2017W2.F2F Canvas Orientation Apr2018","default_view":"syllabus","root_account_id":1,"enrollment_term_id":5,"end_at":null,"public_syllabus":false,"public_syllabus_to_auth":false,"storage_quota_mb":4000,"is_public_to_auth_users":false,"apply_assignment_group_weights":false,"calendar":

Chain requests to do something useful.

Example
GET my courses
GET specific course
GET assignment for specific course
GET that assignments submission area
POST data to assignment submission
GET status of data transfer

Done.

Need more help? Check out the site below.
This will tell you what calls and endpoints are possible to use.
NOTE: Remember that as a student, you will only have access to what your Canvas role allows.

https://canvas.ubc.ca/doc/api/
https://canvas.ubc.ca/doc/api/live#!/

How do I get help?

Help!

Have a question?

- Asynchronous: Ask a question in the Canvas discussion forums for the hackathon course

- Synchronous: Ask a question in Zoom

Want to read?

- Check out the links in the Github repo

Go forth and Hack!