



# An Cookbook

“Is it possible to achieve a **rich** integration using LTI standards?”

**IMS Global Europe Conference**, November 2017  
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- Revolutionizing the experience of writing to learn
- The formative feedback and originality checking services promote critical thinking, ensure academic integrity and help students improve their writing
- Most well known--and used--as a plagiarism detection service
- Turnitin also provide instructors with the tools to engage students in the writing process, provide personalized feedback, and assess student progress over time



Cengage **Multidiscipline** Courseware Platform  
**Hand-Picked** Partners -> Deep Integration  
Course Assembled by Content Producers  
Customizable by Instructors



TC

LTI++



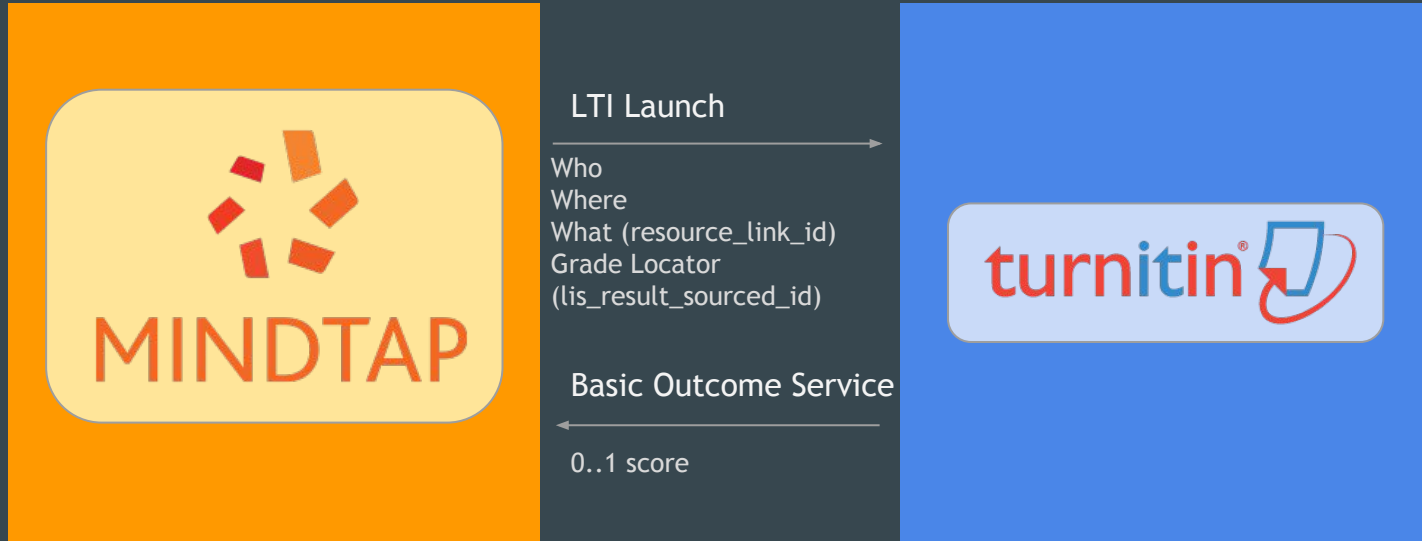
TP TC



LTI++ (mindapp API)

TP/mindapp

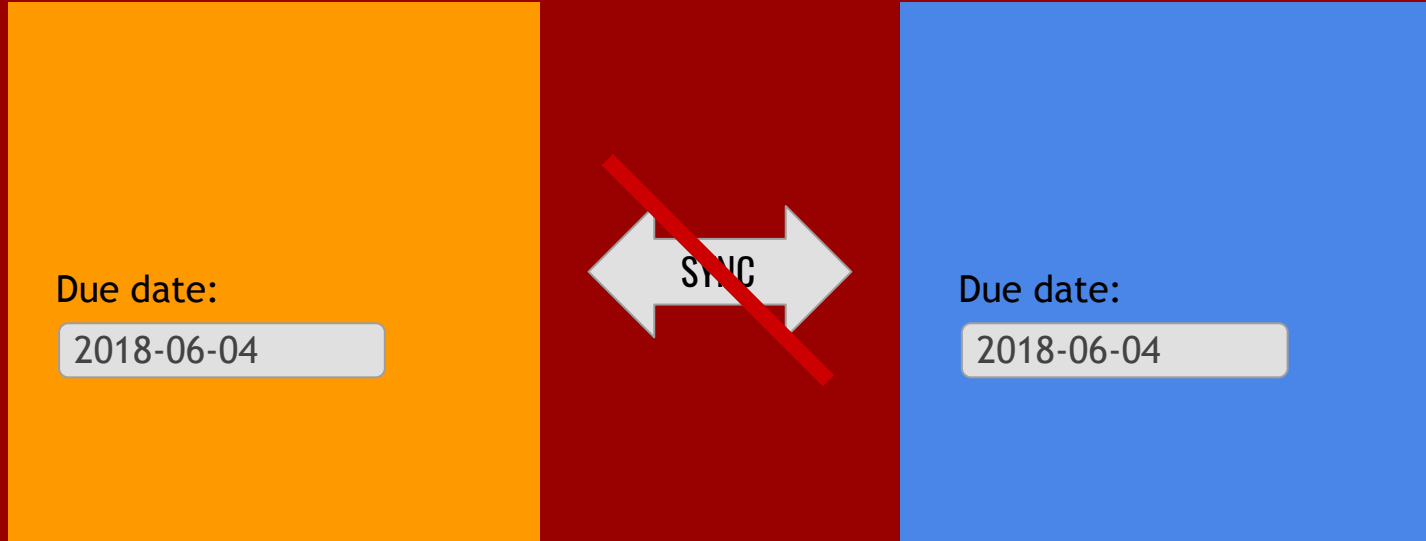
# Base ingredients: LTI 1.1 (LTI Launch + Basic Outcome)



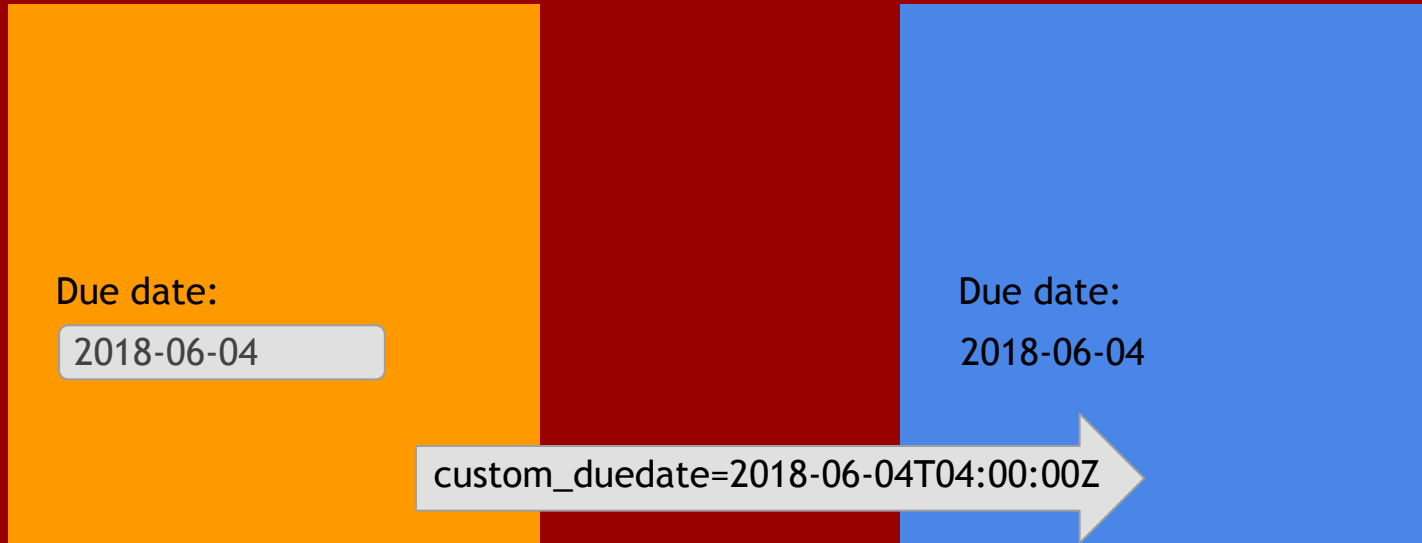
# Recipe 3: Syncing Availability Dates



# No clear source of Truth, no Sync mechanics



# Custom Param: duedate=\$ResourceLink.submission.endDateTime



TurnItIn shows as Read-Only parameters explicitly passed by Mindtap (dates, points)



# Per user end date duedate\_extension

Ins



Due date:

2018-06-04

custom\_duedate=2018-06-04T04:00:00Z

Due date:

2018-06-04

Stu 1



Submits on

2018-06-09

Late

Stu 2



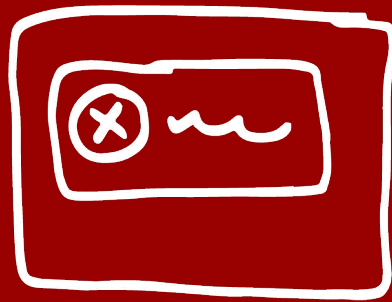
Submits on

2018-06-09

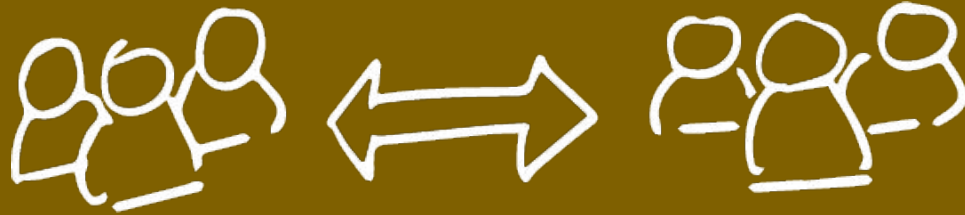
custom\_duedate\_extension=  
2018-06-010T04:00:00Z

Accepted

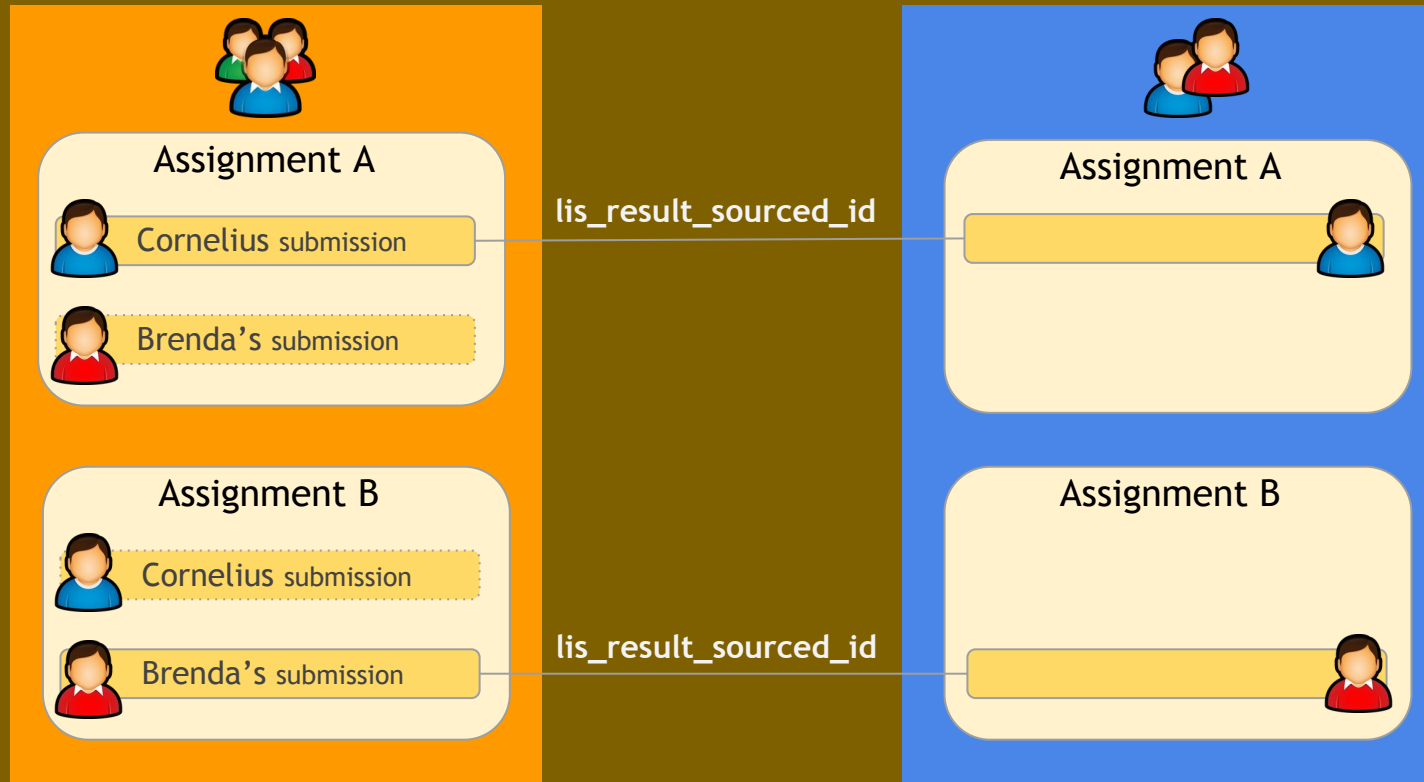
# DEMO!



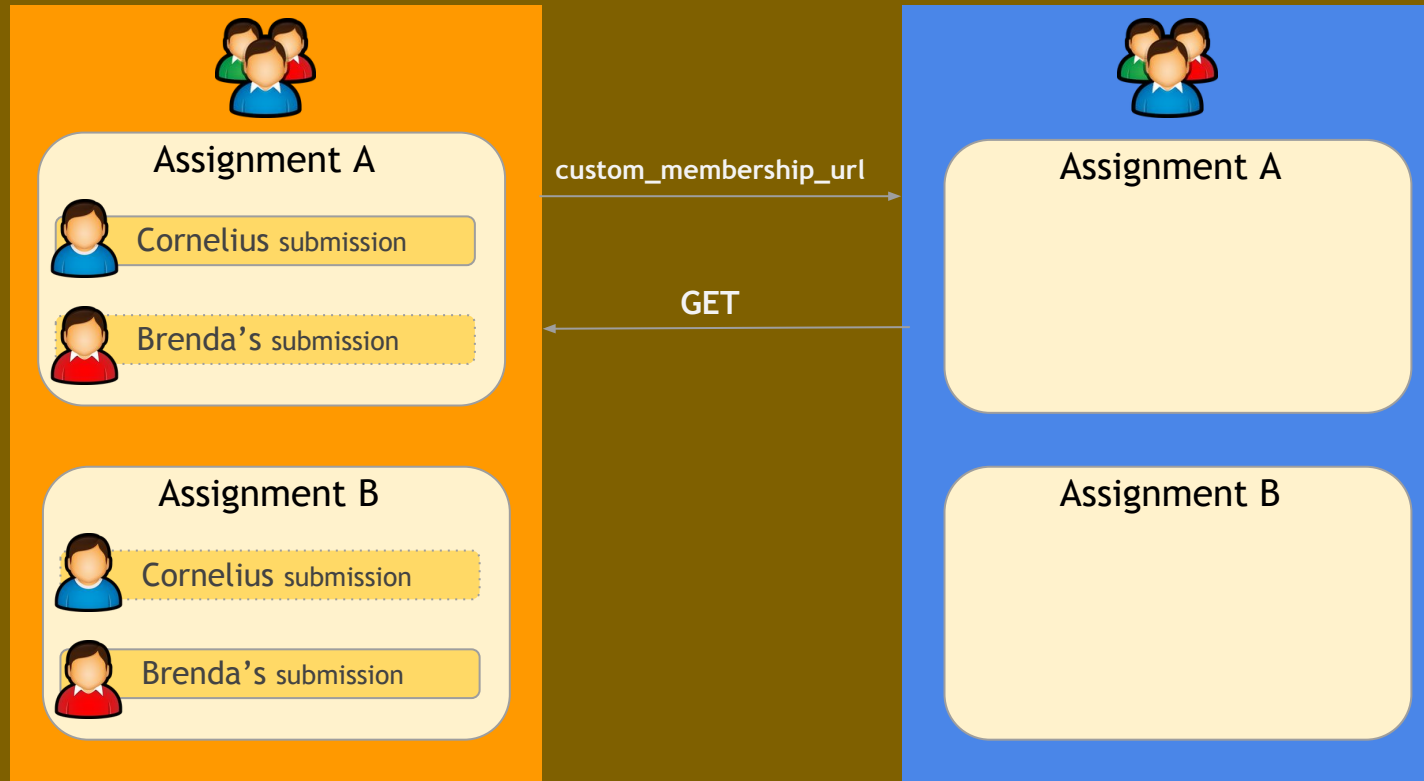
# Recipe 1: Submitting on Student Behalf



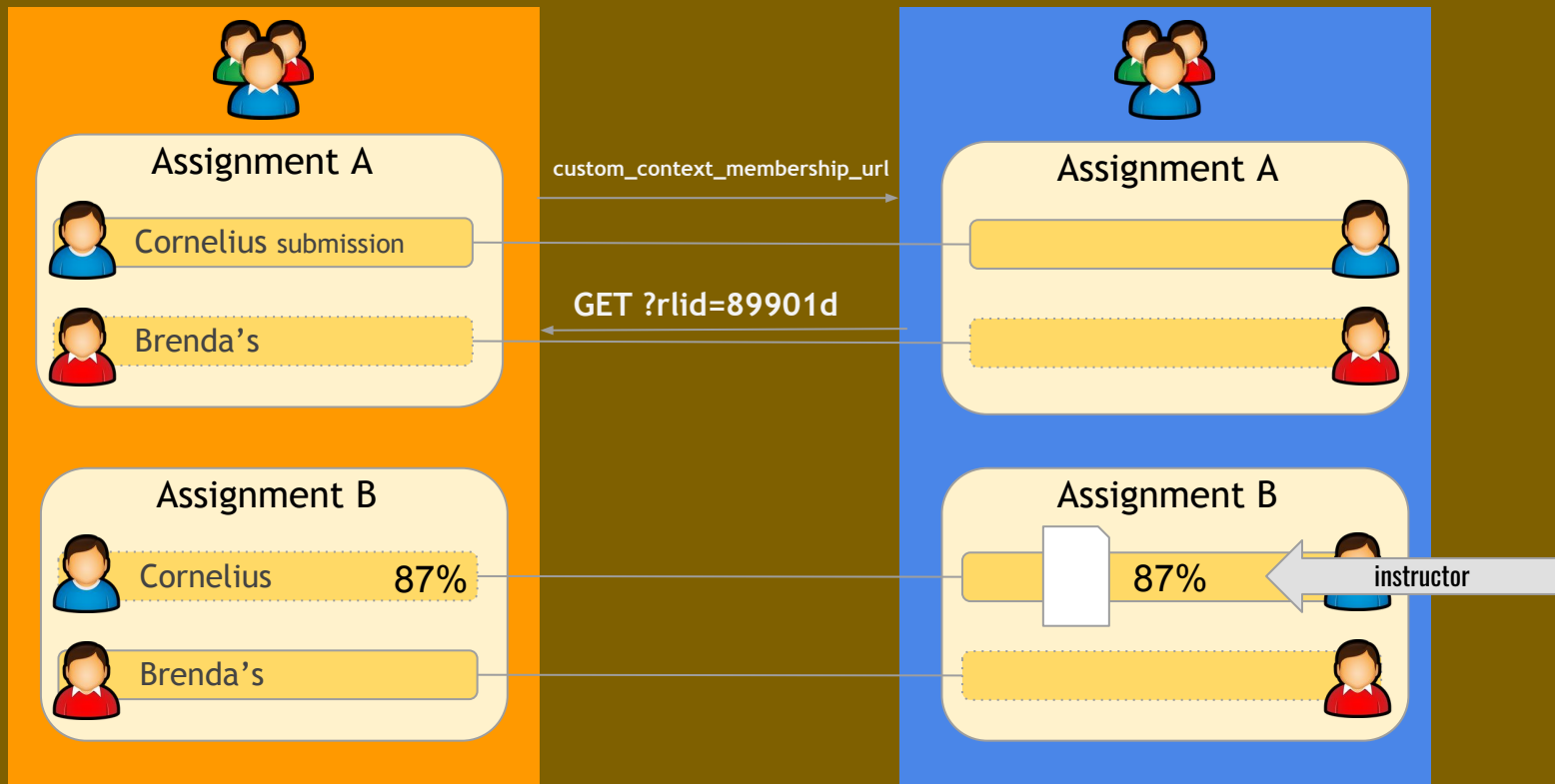
# Issue: User and Result ID require Student launch



# Recipe: Membership Service! It gives the Roster...



# Recipe: ... and the lis\_result\_sourcedid!



# How to keep in Sync efficiently? Delta updates!

## 3.2 Membership container media type

The accompanying HTML documentation defines the following media type used by the membership service:

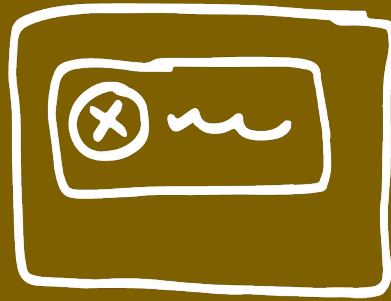
- application/vnd.ims.lis.v2.membershipcontainer+json

```
{
  "@context" : [
    "http://purl.imsglobal.org/ctx/lis/v2/MembershipContainer",
    {
      "liss" : "http://purl.imsglobal.org/vocab/lis/v2/status#",
      "lism" : "http://purl.imsglobal.org/vocab/lis/v2/membership#"
    }
  ],
  "@type" : "Page",
  "@id" : "http://lms.example.com/sections/2923/memberships/?rlid=49566-rkk96",
  "nextPage" : "http://lms.example.com/sections/2923/memberships/?rlid=49566-rkk96p",
  "differences" : "http://lms.example.com/sections/2923/memberships/?x=1422554502",
  "page0f" : {
    "@type" : "LISMembershipContainer",
    "membershipSubject" : {
      "@type" : "Context",
      "contextId" : "2923-abc",
      "membership" : [
        {
          "status" : "liss:Active",
          "member" : {
            "@type" : "LISPerson",
            "sourcedId" : "school.edu:user",
            "userId" : "000826b0-7fc0-4060-006f-27b2066ac545"
```

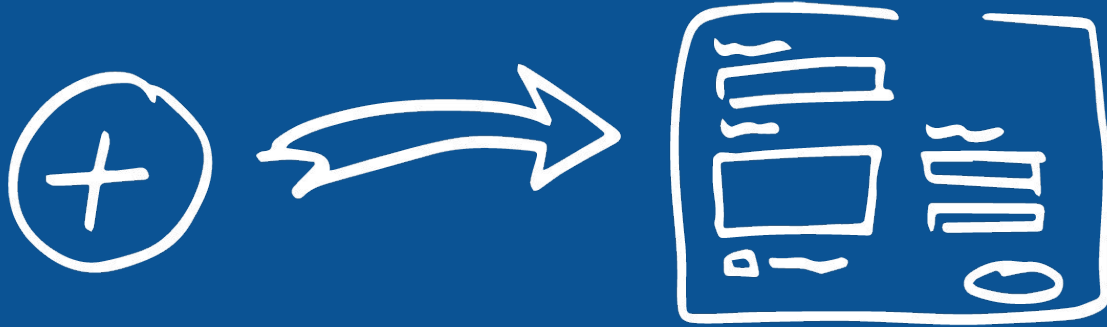
Membership Service 1.0, final may 2016



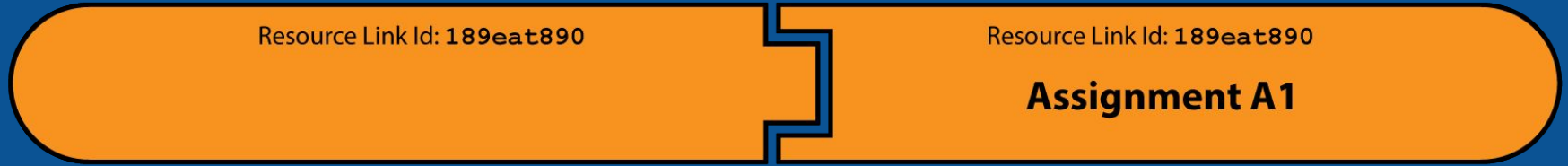
# DEMO!



## Recipe 2: The ADD flow (Deep Linking)



# Basic LTI: No add flow, links are created blank...



... first launch is create

# Recipe: use Custom Params for on the fly creation



... requires a **custom UI** to collect those :(

# Better Recipe: Use Content Item Selection Request



```
{
  "@type": "LtiLinkItem",
  "title": "The virtue of CISR",
  "text": "Read on the Content Item Selection Request and write a 1000 words essay on how
  great it can be used to improve integration.",
  "mediaType": "application/vnd.ims.lti.v1.ltilink",
  "custom": {
    "journalcheck": 1, "s_view_reports": 0,
    "late_accept_flag": 0, "report_gen_speed": "0",
    "use_biblio_exclusion": 0, "anonymous_marking_enabled": "0",
    "use_quoted_exclusion": 0, "allow_non_or_submissions": "0",
    "submit_papers_to": "1", "internetcheck": 1,
    "startdate": "2017-05-02T11:28:00-04:00",
    "duedate": "2017-05-25T11:28:00-04:00",
    "feedbackreleasedate": "2017-05-26T11:28:00-04:00"
  },
  "linelItem": {
    "@type": "LinelItem",
    "scoreConstraints": {
      "@type": "NumericLimits",
      "totalMaximum": "41"
    }
  },
  "url": "https://sandbox.turnitin.com/api/lti/1p0/assignment?lang=en_us"
}
```



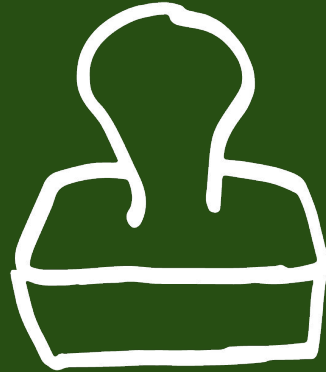
# Save definition as Parameters for On The Fly Creation on 1st launch

Resource Link Id: 189eat890

custom\_params: All Attributes of the Assignment

Content Item Selection Request, 1.0, final May 2016

# Recipe 4: Course Copy





context: autumn\_2017

LinkId: 28a380

context: autumn\_2017

LinkId: 28a380  
journalCheck: true  
acceptLate: true  
....

COPY

context: spring\_2018

LinkId: 98iu2545

context: spring\_2018

LinkId: 98iu2545

?

context: autumn\_2017

LinkId: 28a380

context: autumn\_2017

LinkId: 28a380  
journalCheck: true  
acceptLate: true  
....

context: spring\_2018

LinkId: 98iu2545

context: spring\_2018

LinkId: 98iu2545  
journalCheck: true  
acceptLate: true  
....



custom\_resource\_link\_id\_history: [{"resource": "Link", "link\_id": "28a380"}, {"resource": "Link", "link\_id": "98iu2545"}]



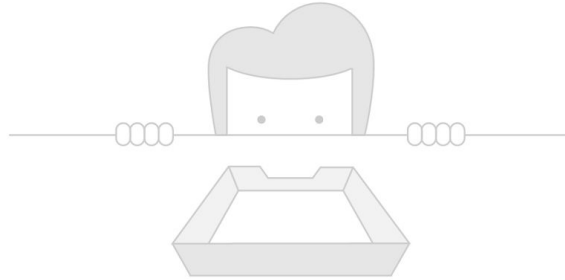
## Insite TurnItIn Assignment



Assignment Inbox

Settings

Helpdesk ?



Inspector Console Debugger Style Editor Performance Memory Network Storage

60 requests, 3,344.21 KB, 48.10 s Filter URLs

Status	Method	File	Headers	Cookies	Params	Response	Timings	Security	Preview
200	PUT	252							
200	POST	resource-interactions							
200	POST	85bb9bc818?a=25851168&sa=1&v=974.7c							
200	POST	assignment							
200	POST	resource-interactions							
200	POST	byId							
200	OPTIONS	resource-interactions							
200	OPTIONS	resource-interactions							
200	GET	collect?v=1&_v=j54&a=1871109840&t=eve							
200	GET	collect?v=1&_v=j54&a=1871109840&t=eve							

Filter request parameters

- tool\_consumer\_instance\_guid: "mindtap-qa.cengage.com"
- custom\_context\_memberships\_url: "http://mindtap-qa.cengage.com/...0-375d-4c69-8545-69912fb1c40b"
- resource\_link\_id: "39830-1d863fe0-375d-4c69-8545-69912fb1c40b"
- custom\_feedbackreleasedate: "2017-12-21T04:59:59Z"
- custom\_maxpoints: "23"
- custom\_duedate: "2017-12-21T04:59:59Z"
- custom\_resource\_link\_id\_history: "39715-1d863fe0-375d-4c69-8545-69912fb1c40b"
- lti\_version: "LTI-1p0"
- lis\_person\_contact\_email\_primary: "tti.instructor@swlearning.com"
- auth\_consumer\_key: "69665"

Use  
\$Context.id.history  
\$ResourceLink.id.history  
to Copy Courses and Activities

<https://www.imsglobal.org/lti-course-copy-road-nowhere>

The Course Copy Road to Nowhere  
LTI V1.2 Substitution Parameters

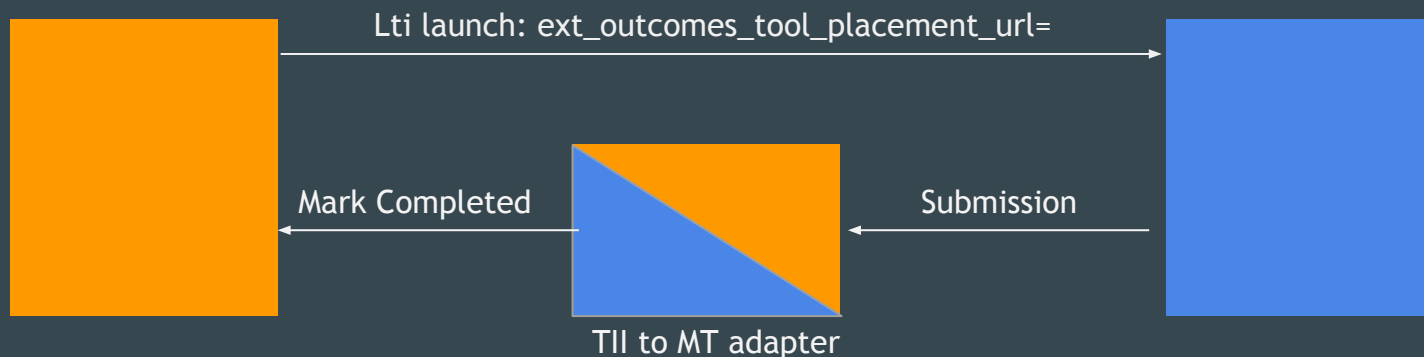
# Recipe 6: marking an activity **completed** and **pending grading**



# Student submission is complete (needs grading)

Now

- Use Custom Turn It In call back: `ext_outcomes_tool_placement_url`
- Callback URL on Submission:
  - Submission is Done
  - Can be used to download it



# Tomorrow... Grade Service !

## 3.3.1 Activity Progress

`ActivityProgress` must be used to hint the Tool Consumer on the status of the user on the Activity's completion.

The `activityProgress` property of a score must have one of the following values:

- `Initialized` – the initial state of a result resource for newly created line item;
- `Started` – the activity associated with the line item has been started by the user to which the result relates;
- `InProgress` – the activity is being drafted and is available for comment;
- `Submitted` – the activity has been submitted at least once by the user but the user is still able make further submissions;
- `Completed` – the user has completed the activity associated with the line item.

It is up to the tool provider to determine the appropriate `activityProgress` value.

## 3.3.2 Grading Progress

`GradingProgress` must be used to hint the Tool Consumer on the status of the Grading process, including allowing to inform when human intervention is needed.

The `gradingProgress` property of a score must have one of the following values:

- `Completed` – The grading process is completed; the score value, if any, represents the current Final Grade;
- `Pending` – Final Grade is pending, but does not require manual intervention; if a Score value is present, it indicates the current value is partial and may be updated.
- `PendingManual` – Final Grade is pending, and it does require human intervention; if a Score value is present, it indicates the current value is partial and may be updated during the manual grading.
- `NotReady` – There is no grading process occurring; for example, the student has not yet made any submission.

It is up to the tool provider to determine the appropriate `gradingProgress` value.



# Recipe 5: Launching to Feedback Studio from Gradebook



# Student launches activity

**lti\_message\_type:** basic-lti-launch-request

**resource\_link\_id:** 7-ztest-914078f1-2244

**roles:** Learner

**user\_id:** 23bae854c0f5e1a6:-325ee044:136f47b54f5:-7ff4

**lis\_outcome\_service\_url:** http://local.mindtap/nb/service/LtiOutcome/pox/

**lis\_result\_sourcedid:** mta24704:7:0:1511295216



*Submission identifier*

# Instructor grades activity (gradebook launch)

**lti\_message\_type:** GradebookResultMessage

**resource\_link\_id:** 7-ztest-914078f1-2244

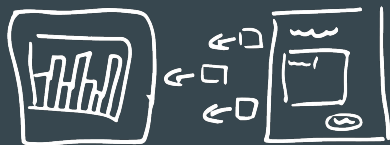
**roles:** Instructor

**user\_id:** f2a286f7415519e4:-6d59b87c:13b7b5dc687:-7ffe

**lis\_outcome\_service\_url:** <http://local.mindtap/nb/service/ltiOutcome/pox/>

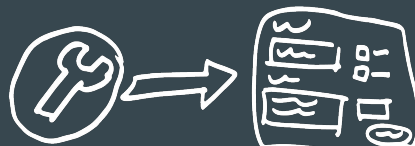
**lis\_result\_sourcedid:** mta24704:7:0:1511295216

**custom\_for\_user\_id:** 23bae854c0f5e1a6:-325ee044:136f47b54f5:-7ff4



*White Box Analytics Event?*

Caliper, Session & Assignment Profiles



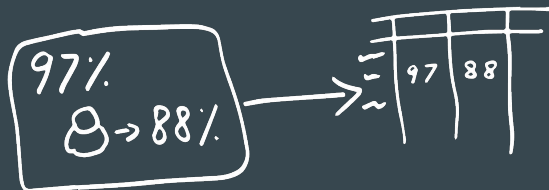
*Edit Flow?*

Content Item Update Message



*2 ways sync on dates*

Content Item Service, Notification



*2ndry Activity Grade (Peer Review)*

Gradebook Line Item Service

# Yes a **Rich** Integration is Possible!

It's up to... **US!**

Be aware of the specs present and *incoming*

Contribute!

Push for adoptions and resist the **proprietary side**