Direct Manipulation Programming

Ravi Chugh

Nick Collins

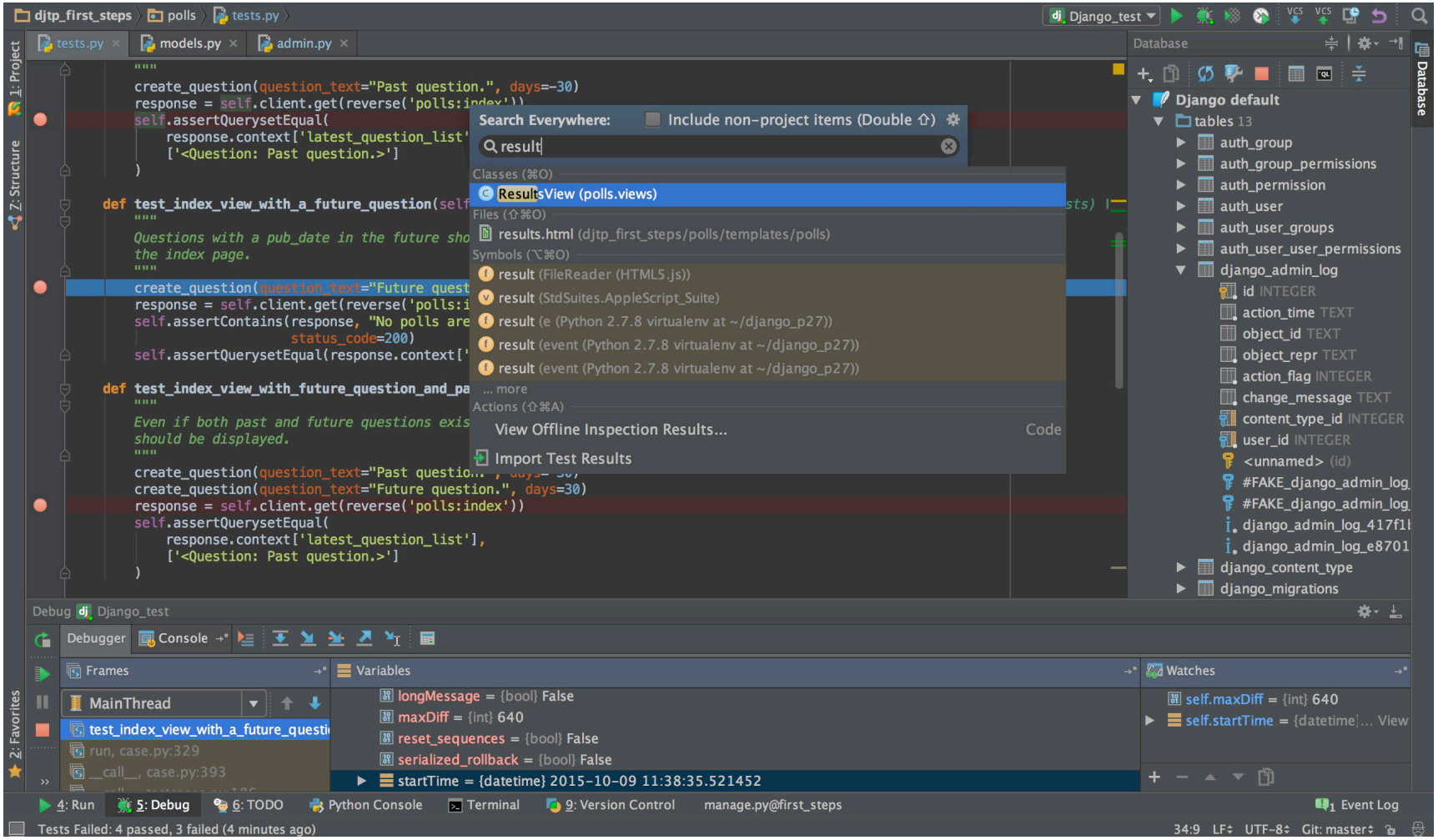
Brian Hempel

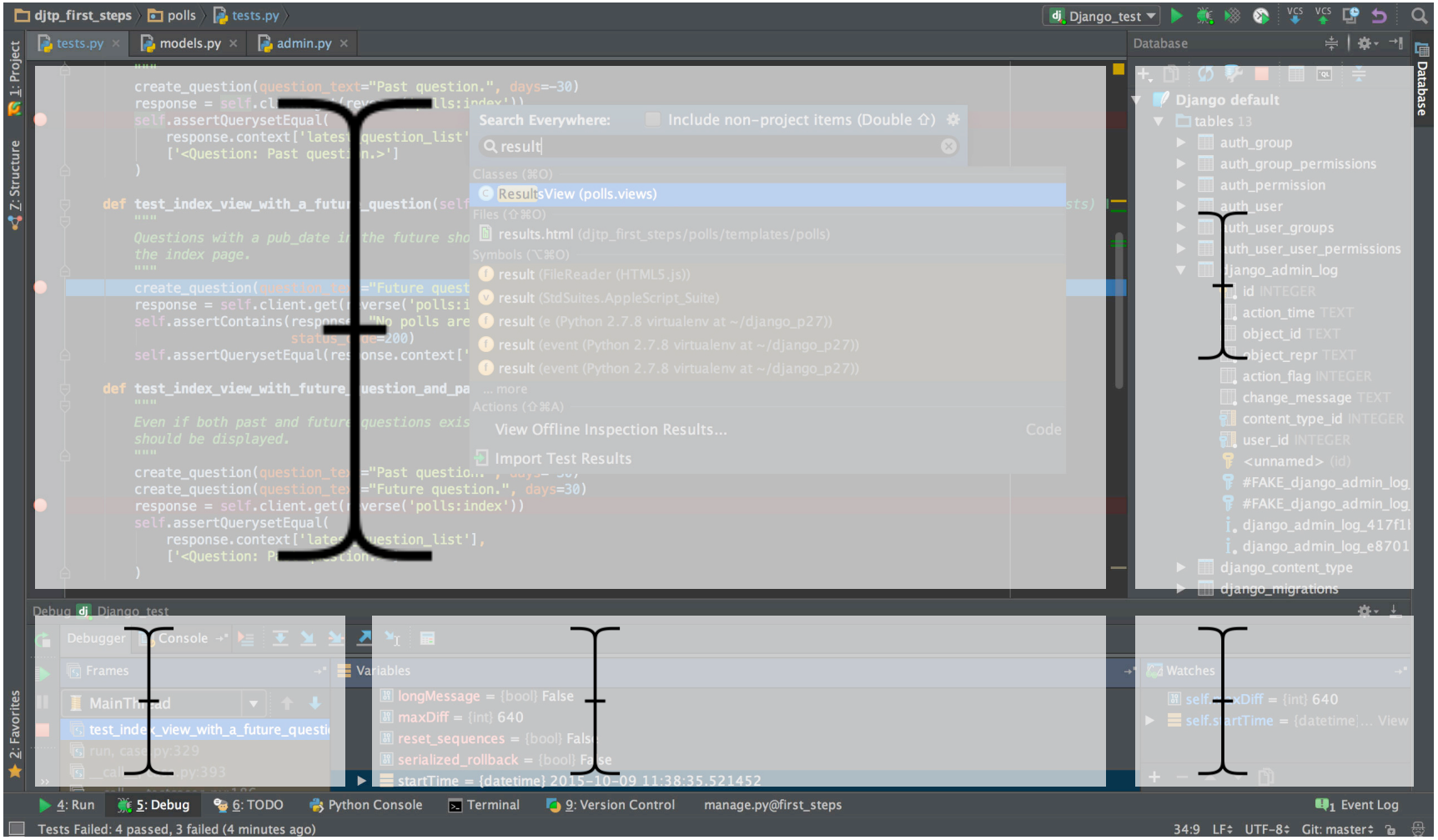
Justin Lubin

Mikaël Mayer

THE UNIVERSITY OF CHICAGO

ICFP Tutorial
09.27.2018


djtp_first_steps
polls
tests.py
Django_test
tests.py
models.py
admin.py
Search Everywhere:
Include non-project items (Double ⇧)
result
Classes (⌘O)
ResultsView (polls.views)
Files (⇧⌘O)
results.html (djtp_first_steps/polls/templates/polls)
Symbols (⌥⌘O)
result (FileReader (HTML5.js))
result (StdSuites.AppleScript_Suite)
result (e (Python 2.7.8 virtualenv at ~/django_p27))
result (event (Python 2.7.8 virtualenv at ~/django_p27))
result (event (Python 2.7.8 virtualenv at ~/django_p27))
... more
Actions (⇧⌘A)
View Offline Inspection Results... Code
Import Test Results
Database
Django default
tables 13
auth_group
auth_group_permissions
auth_permission
auth_user
auth_user_groups
auth_user_user_permissions
django_admin_log
id INTEGER
action_time TEXT
object_id TEXT
object_repr TEXT
action_flag INTEGER
change_message TEXT
content_type_id INTEGER
user_id INTEGER
<unnamed> (id)
django_content_type
django_migrations
Debug Django_test
Debugger
Console
Frames
MainThread
test_index_view_with_a_future_questi
run, case.py:329
__call__, case.py:393
Variables
longMessage = {bool} False
maxDiff = {int} 640
reset_sequences = {bool} False
serialized_rollback = {bool} False
startTime = {datetime} 2015-10-09 11:38:35.521452
Watches
self.maxDiff = {int} 640
self.startTime = {datetime}... View
4: Run
5: Debug
6: TODO
Python Console
Terminal
9: Version Control
manage.py@first_steps
Event Log
Tests Failed: 4 passed, 3 failed (4 minutes ago)
34:9
LF
UTF-8
Git: master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action_time TEXT
object_id TEXT
object_repr TEXT
action_flag INTEGER
change_message TEXT
content_type_id INTEGER
user_id INTEGER
<unnamed> (id)
#FAKE_django_admin_log
#FAKE_django_admin_log
django_admin_log_417f1
django_admin_log_e8701
django_content_type
django_migrations
Debug Django_test
Debugger
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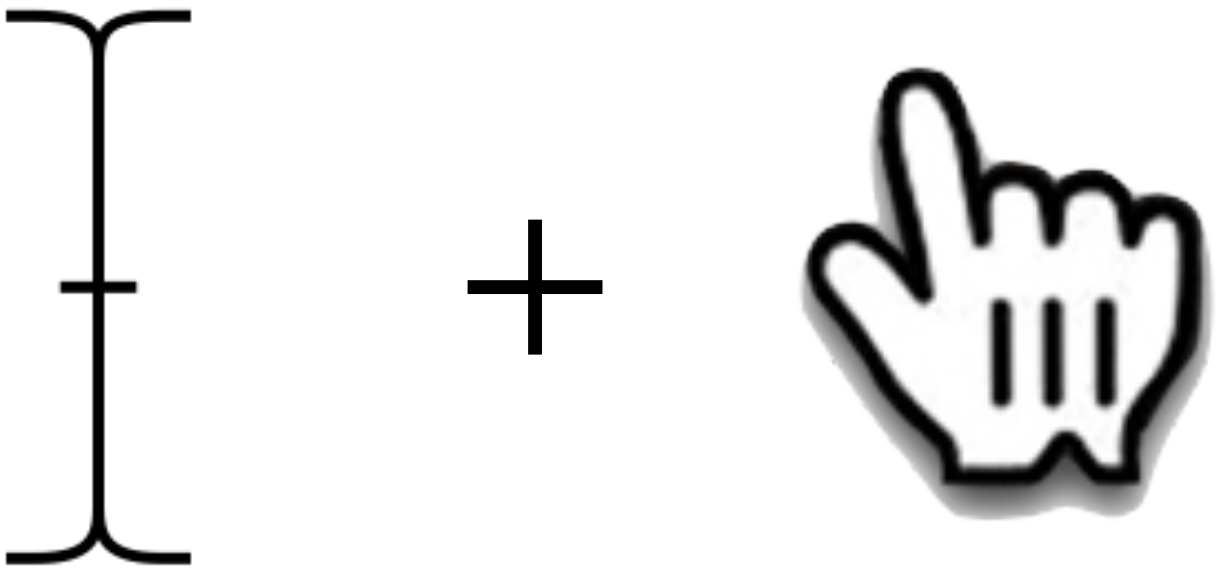
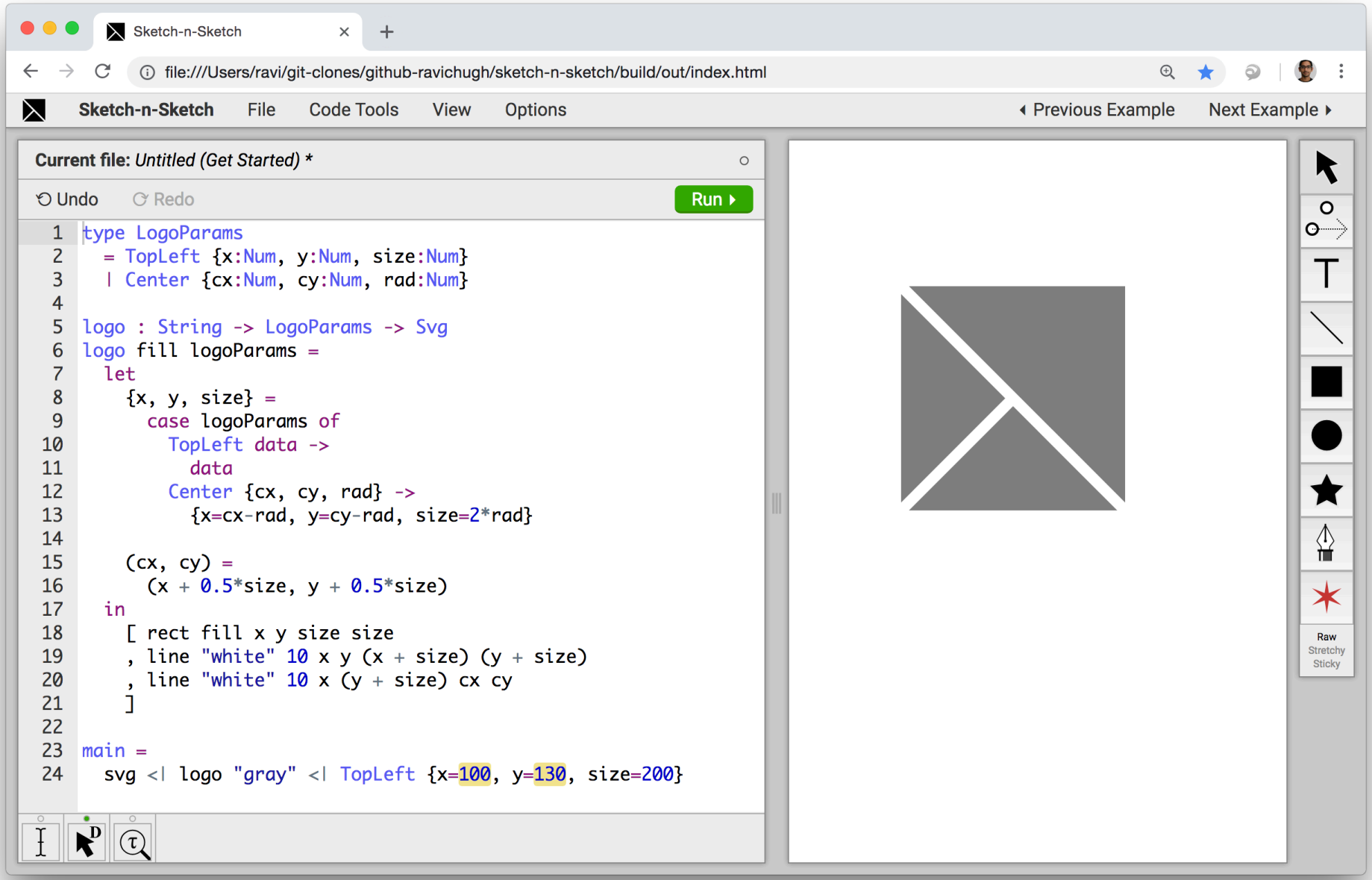
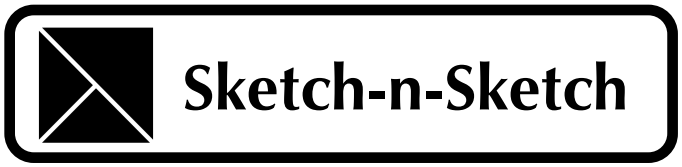


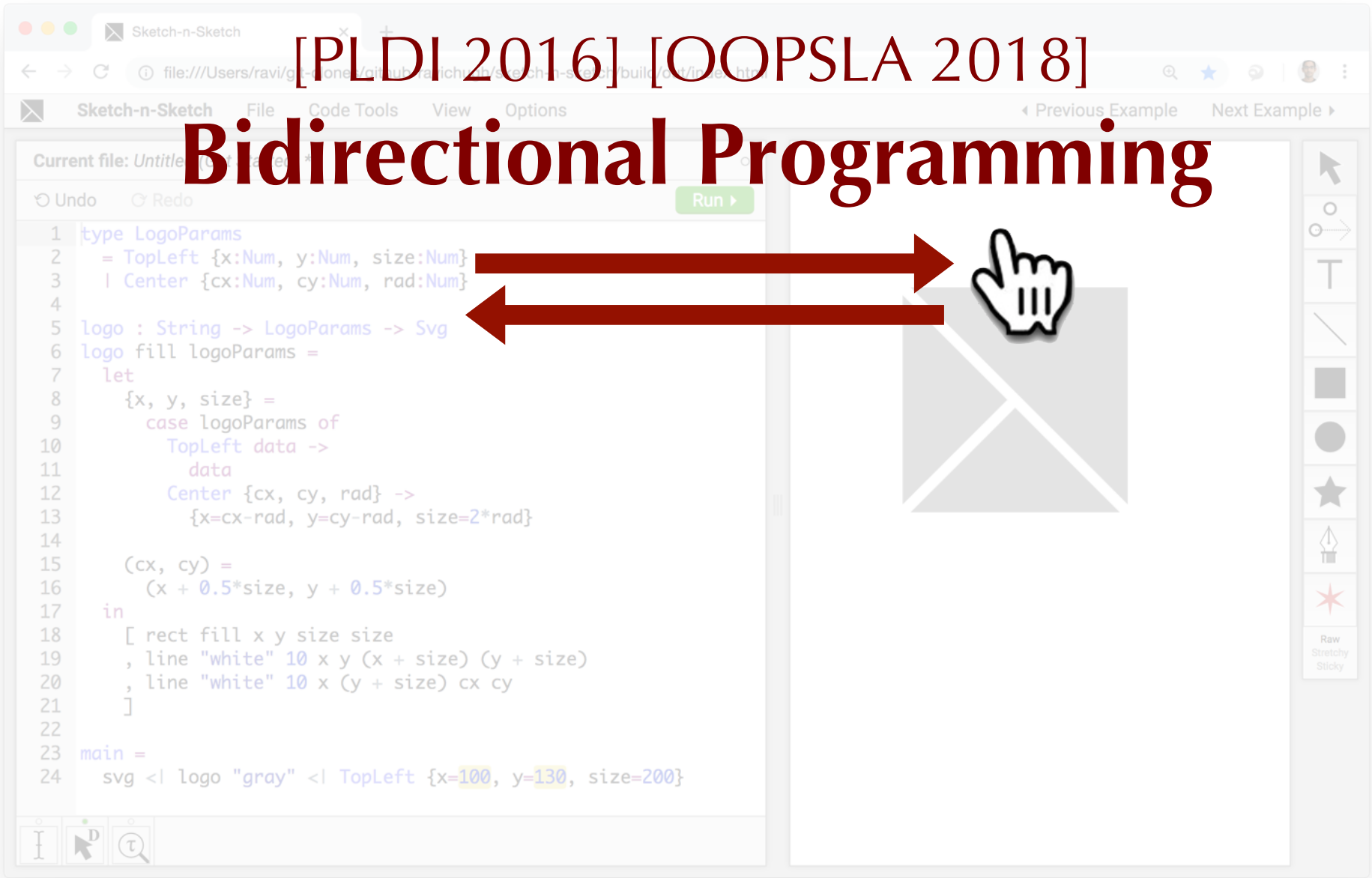
Sketch-n-Sketch

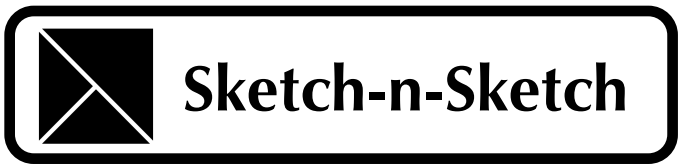




[PLDI 2016] [OOPSLA 2018]

Bidirectional Programming



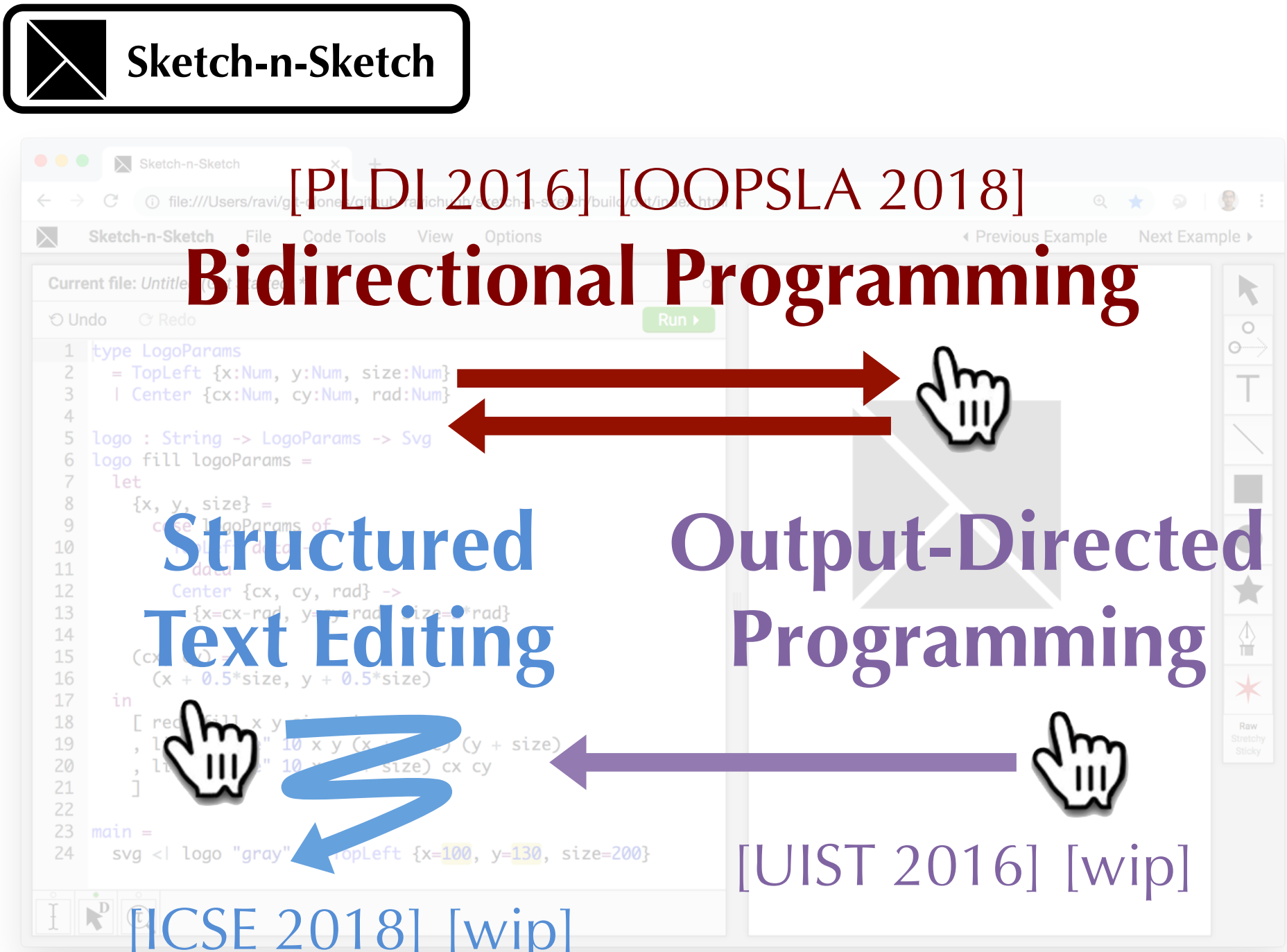


[PLDI 2016] [OOPSLA 2018]

Bidirectional Programming

Output-Directed Programming

[UIST 2016] [wip]


Sketch-n-Sketch
[PLDI 2016] [OOPSLA 2018]
Bidirectional Programming
Structured Text Editing
Output-Directed Programming
[ICSE 2018] [wip]
[UIST 2016] [wip]

Sketch-n-Sketch

Justin Lubin

~now–1:15pm

Sketch-n-Sketch

[PLDI 2016] [OOPSLA 2018]

Bidirectional Programming

Mikaël Mayer

~1:15–3:10pm

2:10pm

3:10pm

Sketch-n-Sketch

Output-Directed Programming

Brian Hempel

~3:30–3:45pm

[UIST 2016] [wip]

Sketch-n-Sketch

Nick Collins

~3:45–4:00pm

Structured Text Editing

[ICSE 2018] [wip]

ravichugh.github.io/sketch-n-sketch/tutorial/icfp-2018/