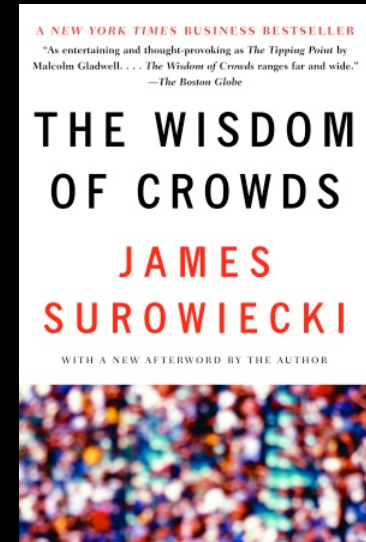


Evolving Teaching and Learning: Beyond the LMS


Dr. Charles Severance
University of Michigan
IMS Global Learning Consortium
www.dr-chuck.com

wiscrowd.appspot.com

- Log in with your GMail account
- Navigate to the Wisdom of Crowds Application
- We will come back to this later in the talk



<< back to portal [CloudCollab](#) [Logout \(drchuck\)](#)

Hello: drchuck (Instructor) from S1101 

Enter Guess:

Enter Name (opt):



"Collaborative eScience:
Evolving Approaches"



**PREVIEW
SLIDES**

? HELP

⏪ DONE

XP Web Lecture
Archive Project

← GO BACK 1

GO AHEAD 1 →

00:00:00

slide 001

Collaborative eScience: Evolving Approaches

Charles Severance
Executive Director, Sakai Foundation

Shaping Collaboration 2006
Geneva, Switzerland
December 11-13, 2006



JUMP DIRECTLY TO SLIDE ↕

[synchronize video with current slide](#)

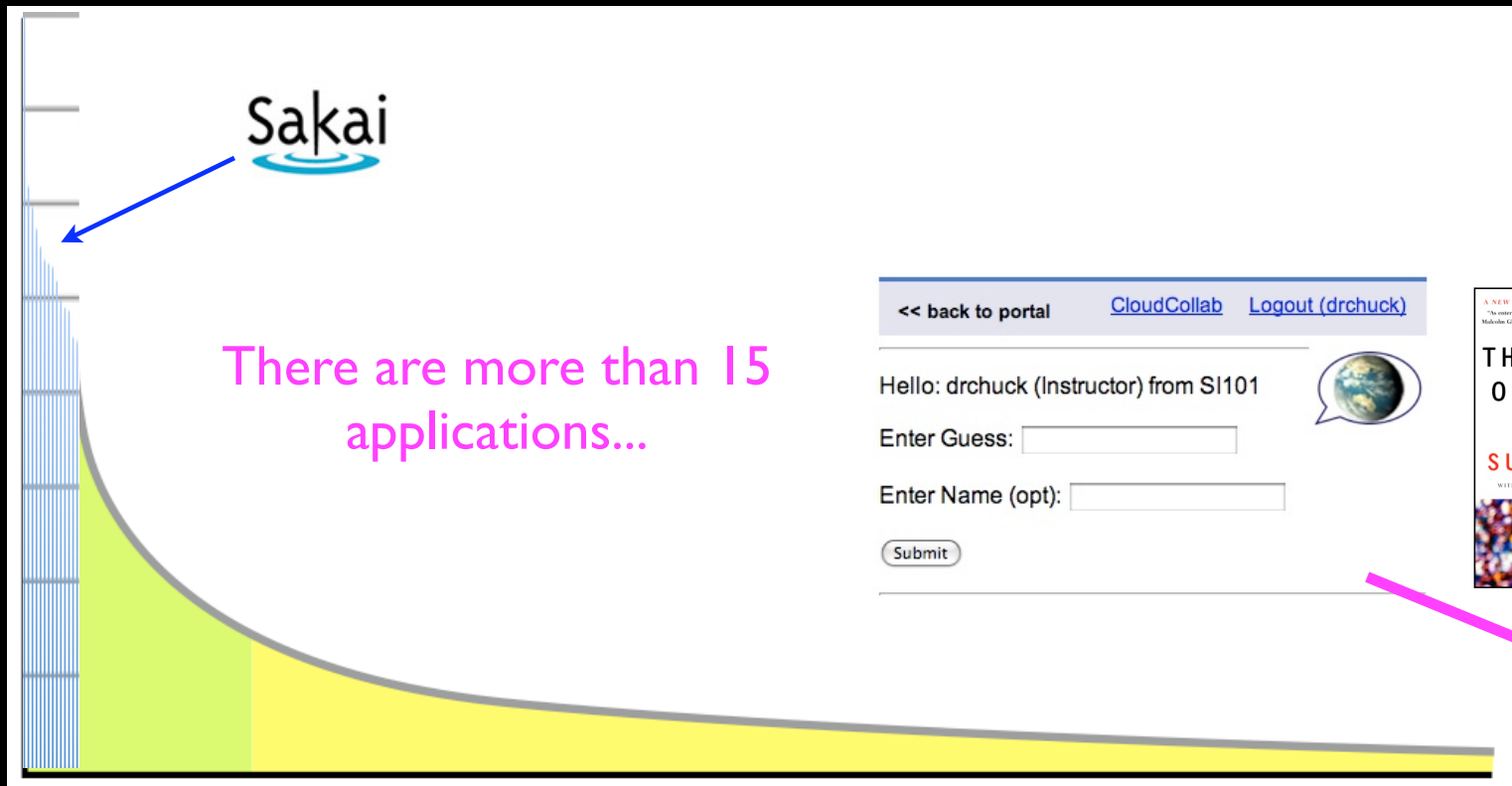
www.syncomat.com

Chuck's Goals for Sakai



- ✓ Bring enterprise-level open source LMS into the Market
- ✓ Collect bright worldwide developer community and achieve sufficient adoption for sustainability
- ? Focus on ease of adding new tools
- ?? Create market to enable the free exchange of tools
- ✗ Get teachers writing tools





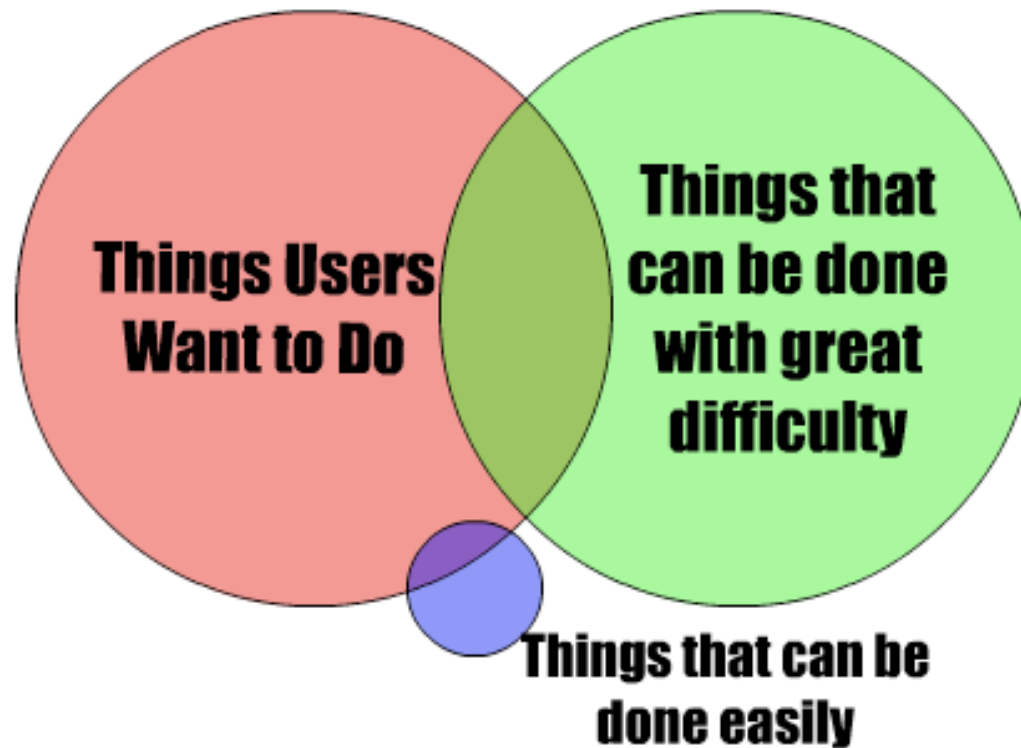
2008 Sakai Usage Data at University of Michigan



The end of the LMS as we know it....

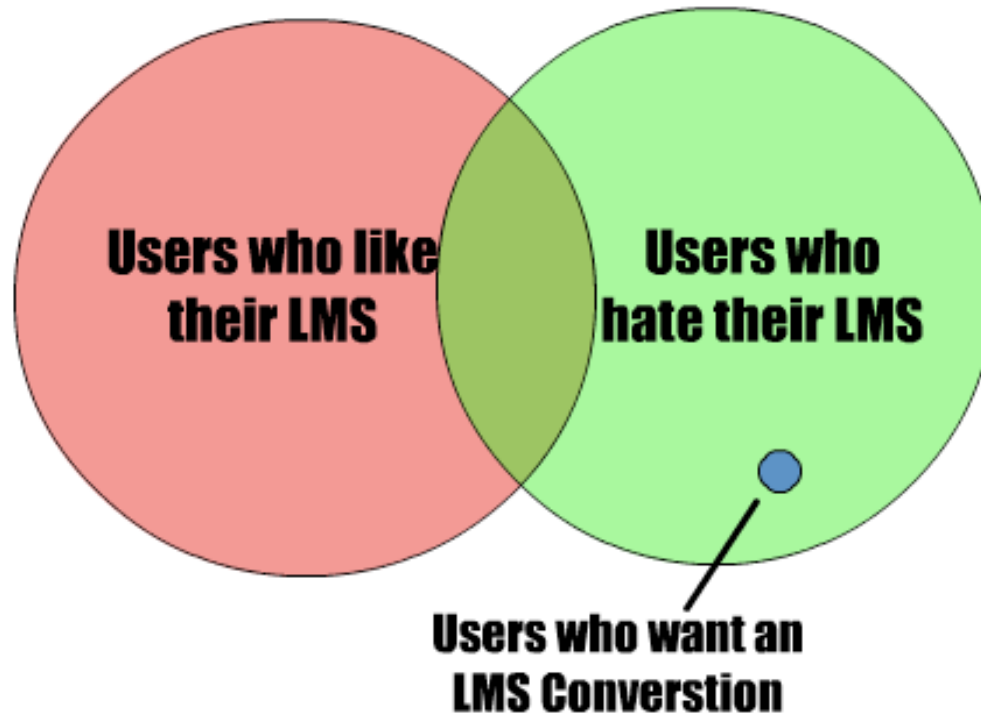


LMS Authoring Environments



<http://graphjam.com/>

Love / Hate

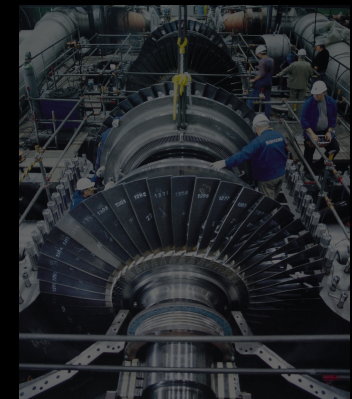
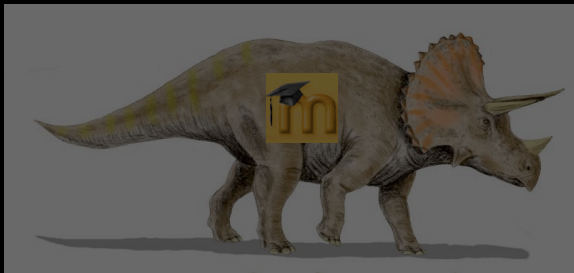
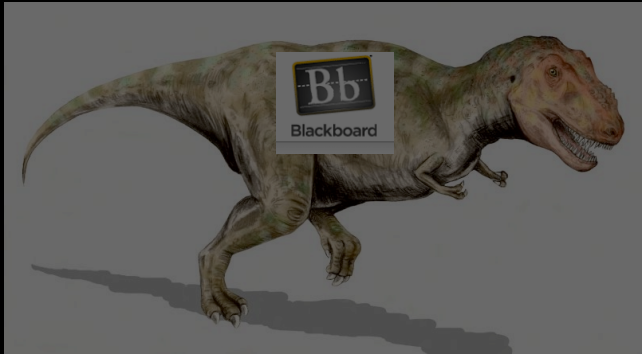


<http://graphjam.com/>

2015 LMS Market



<http://graphjam.com/>





MITOPENCOURSEWARE
MASSACHUSETTS INSTITUTE OF TECHNOLOGY

CONNECTIONS[®]

Mc
Graw
Hill Education

open.michigan



MERLOT
Multimedia Educational Resource
for Learning and Online Teaching

PEARSON
Education

Commercial

Tools
Interoperability

LMS

Common
Cartridge



Publishers

Open Source

Standards

www.imsglobal.org

Learning^{-1.0}

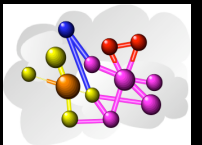
Inverted Learning - (i.e. matrix inverse)



Installing Your Next LMS

- Insert this code in your web page and press “Refresh”

```
<script type="text/javascript"  
  src="http://api.cloudsocial.org/js/ile-main.js">  
</script>  
<script type="text/javascript">  
  ile_init("49c480149a008");  
</script>
```



PythonLearn - Self-paced learning Python

http://www.pythonlearn.com/ RSS Google

PythonLearn [Book](#) [Software](#) [Informatics](#) [Instructor](#) [Python](#) [About](#)

New: Learning Google Application Engine www.appenginelearn.com

For the best effect to learn Python on your own, you should purchase the [textbook](#) and go through the materials in order. If you want to attempt the programming assignments make sure to install the appropriate [software](#) on your system. Installation instructions are provided under the "Software" tab.

This site should not be a substitute for a course you are taking - even if the course you are taking is using the same textbook. Each course and each instructor will take their own approach.

Wiscrowd grab | close

Hello: Joe User from IN101

Enter Guess:

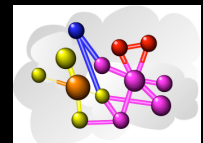
Enter Name (opt):

Basic Python

- Writing Simple Programs (and [Assignment Data](#))
- Computing with Strings (C [through a file](#))
- Decision Structures (Chapter [Through a File Again](#))
- Computers and Programs [who has the most commits](#)

[Assignment 1 - Getting Started](#),
[Assignment 2 - Reading](#)
[Assignment 3 - Reading](#), and
[Assignment 4 - Figuring out](#)

Powered by [CloudSocial](#)



<http://www.cloudsocial.org/>

Learning
Happens
Here

T
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Shape Forces Perspective

Social Learning

what is it?

when will it be more than a buzzword?

Hello Charles Severance,
Welcome to wiscrowd in facebook running in the cloudcollab framework.
URL: /facebook/sample/formtag/
Sample Output
Info None
Path controller=sample action=False resource=False
[Click Me](#)

GO

```
/facebook/sample/formtag/  
fb_sig_locale:en_US  
fb_sig_in_new_facebook:1  
fb_sig_time:1235922461.7169  
fb_sig_added:1  
fb_sig_profile_update_time:123439  
fb_sig_expires:123  
fb_sig_user:579812  
fb_sig_session_key:2.xfG_gB2_TwpF  
fb_sig_api_key:70695fad30f9231f80  
fb_sig_app_id:5318742934  
fb_sig_in_canvas:1  
fb_sig_request_method:POST  
fb_sig_friends:1241 (bytes long)  
fb_sig_position_fix:1  
fb_sig:2c9075!  
thing:
```



Applications



Bookmark wiscrowd



Online Friends (5)

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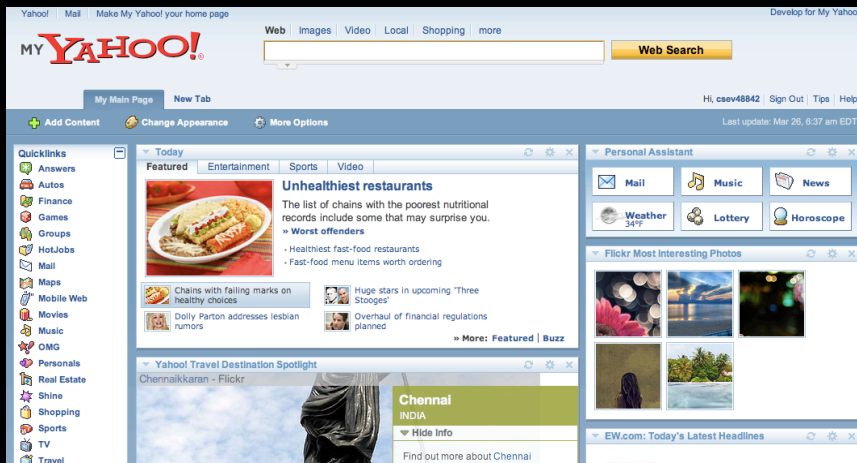
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Markup



T
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O
L

Friend List



YAHOO!



Home

Messages

Pending

Spam? [Delete]

Post

Files

Photos

Links

Database

Polls

Members

Pending

Calendar

Promote

Invite

Management

Groups Labs (Beta)

Applications



Stay up to speed on the latest Groups news and updates, visit the [Groups blog](#) today!

Home

Activity within 7 days: (No Activity)

Description [\(Edit\)](#), [Add Photo](#)

For the users of the UM.Lecture software

Discussion archive: <http://groups.yahoo.com/group/cb2k/>

Product web site: <http://www.netfact.com/csev/projects/cb2k/>

Most Recent Messages

(Group by Topic)

(Message archives are not currently available)

Group Email Addresses

Related Link: <http://www.netfact.com/csev/projects/cb2k/>

Post message: cb2k@yahoogleroups.com

Subscribe: cb2k-subscribe@yahoogleroups.com

Unsubscribe: cb2k-unsubscribe@yahoogleroups.com

List owner: cb2k-owner@yahoogleroups.com

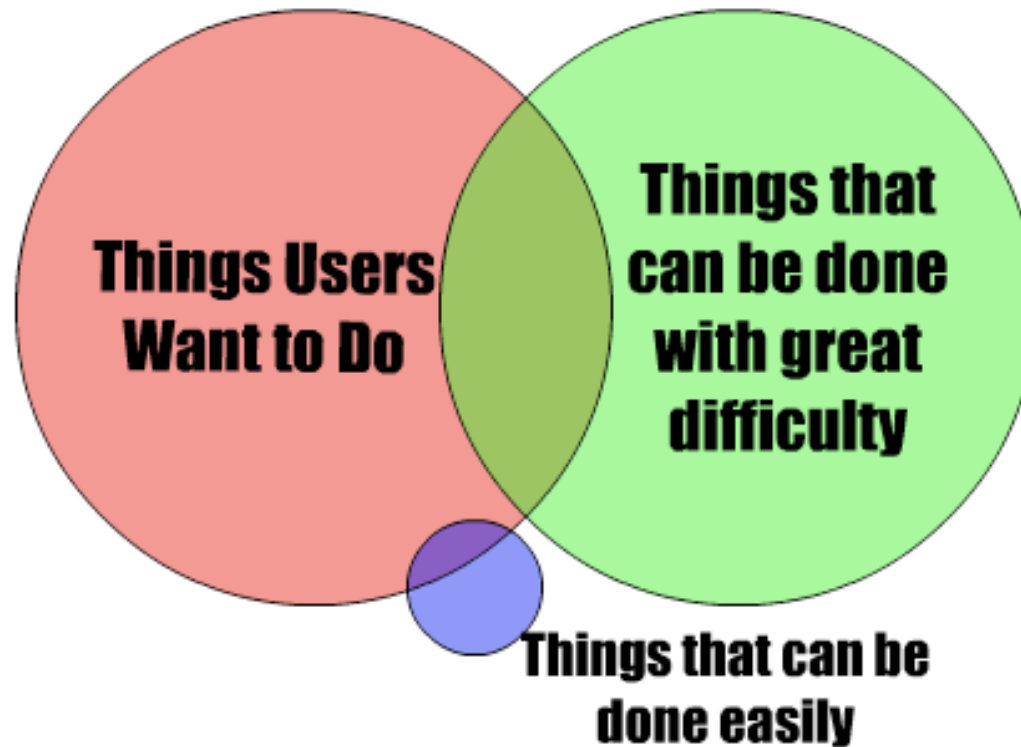


Next Generation LMS

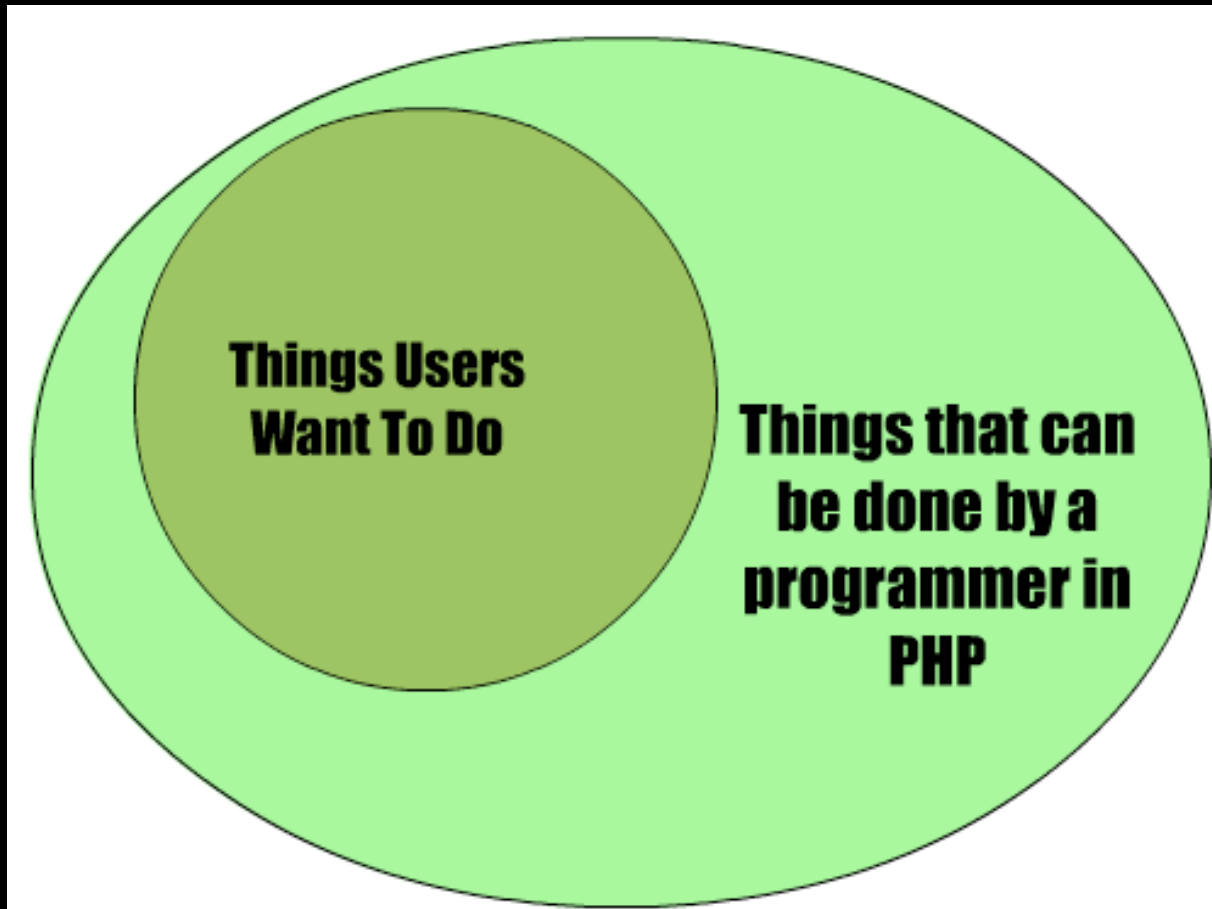


Medical Open
Educational Resources

LMS Authoring Environments



<http://graphjam.com/>



<http://graphjam.com/>

Encore Project

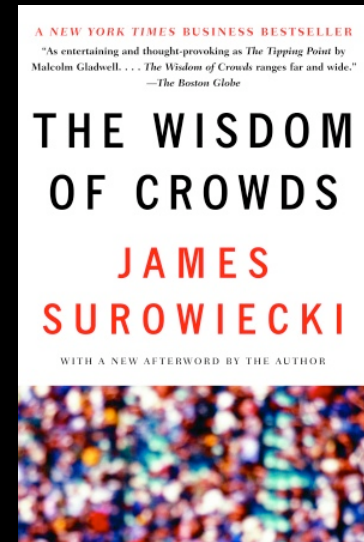


- Eight Students
- Ten Faculty
- Course Length Six Weeks
- Five Tools
- Three Months of Developer Time
- Written in PHP
- Average tool code is 900 lines of code
- Each tool is 100% designed from scratch with User-Centered approach
- Portfolio artifacts

The image shows a screenshot of a web portal interface. On the left side, there is a vertical ladder with the letters J, A, V, A written vertically. A blue vertical line is positioned to the right of the ladder. Below the ladder, there is a green shaded area and a yellow shaded area. In the center, there is a logo for the University of Michigan Medical School, featuring a large yellow 'M' on a blue background with the text 'University of Michigan Medical School' below it. To the right of the logo, the text 'PHP' is displayed in blue. In the top right corner, there are five pink question marks '?????'. Below the question marks, there is a navigation bar with the text '<< back to portal', a link 'CloudCollab', and a link 'Logout (drchuck)'. Below the navigation bar, there is a message 'Hello: drchuck (Instructor) from SI101' next to a globe icon. Below the message, there are two input fields: 'Enter Guess: [input]' and 'Enter Name (opt): [input]'. Below the input fields, there is a 'Submit' button. A pink arrow points from the 'Submit' button towards the right edge of the screenshot.

wiscrowd.appspot.com


- A set of tools which allows multi-player educational in-class games
- Support for the teachers using the book “Wisdom of Crowds”
- Works either stand-alone or inside of an LMS using IMS Learning Tools Interoperability

The image is a screenshot of the wiscrowd application interface. At the top, there is a navigation bar with links for 'My Places', 'Home', 'Help', and 'Logout'. Below this is a header for 'Your Institution UNIVERSITY' with a small image of a building. Underneath the header are several tabs: 'My Institution', 'Courses', 'Community', 'Content Collection', and 'Services'. The main content area shows a greeting: 'Hello: csev from _3_1'. Below the greeting are two input fields: 'Enter Guess: [text input]' and 'Enter Name (opt): [text input]'. At the bottom of the form is a 'Submit Query' button.

wiscrowd.appspot.com

- Log in with your GMail account
- Navigate to the Wisdom of Crowds Application
- Lets guess some angles

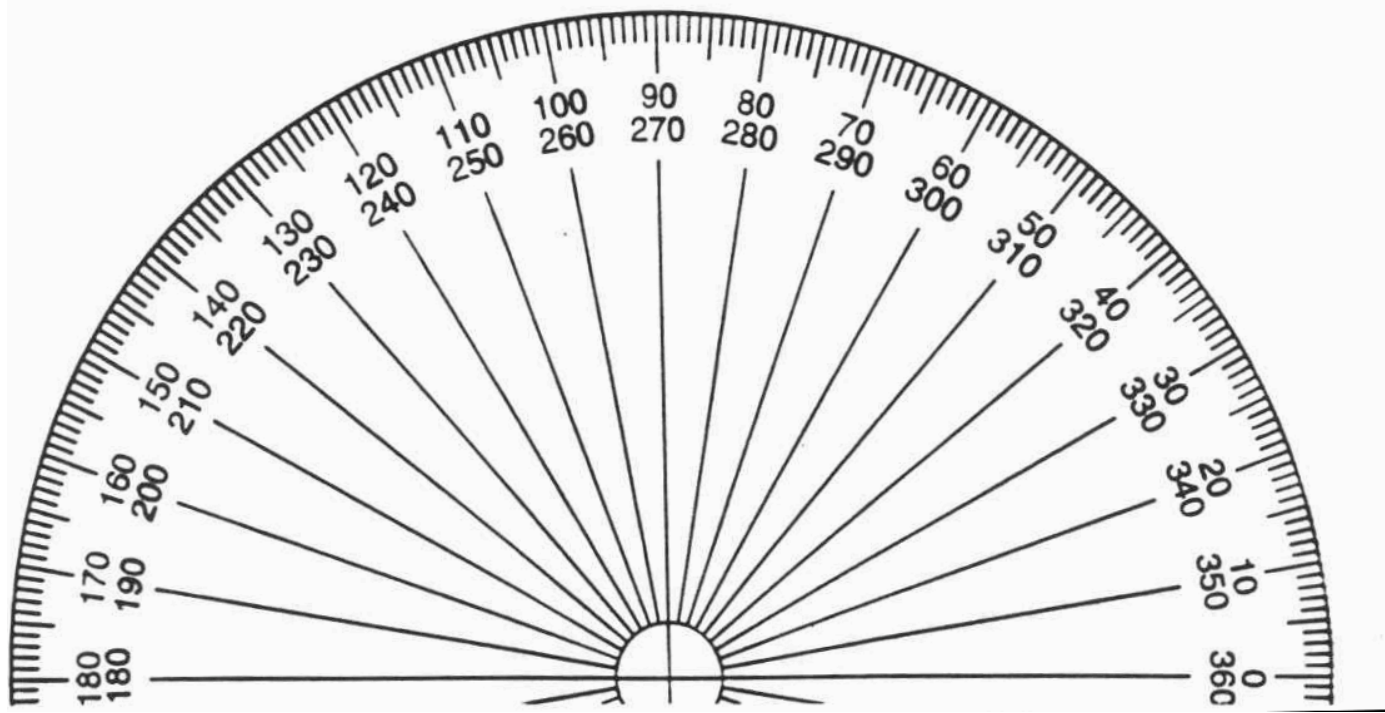
<< back to portal [CloudCollab](#) [Logout \(drchuck\)](#)

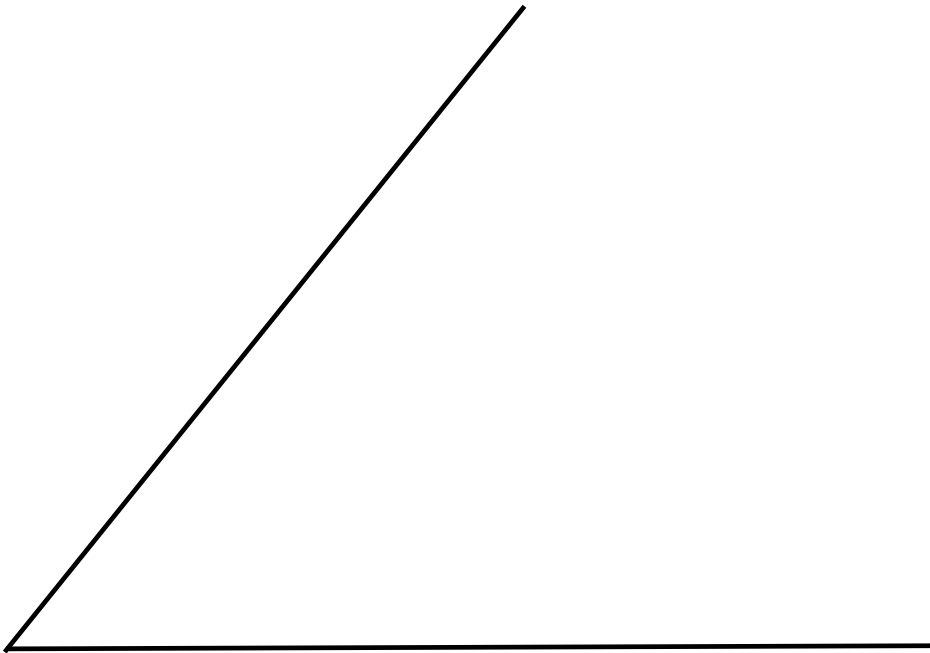
Hello: drchuck (Instructor) from SI101 

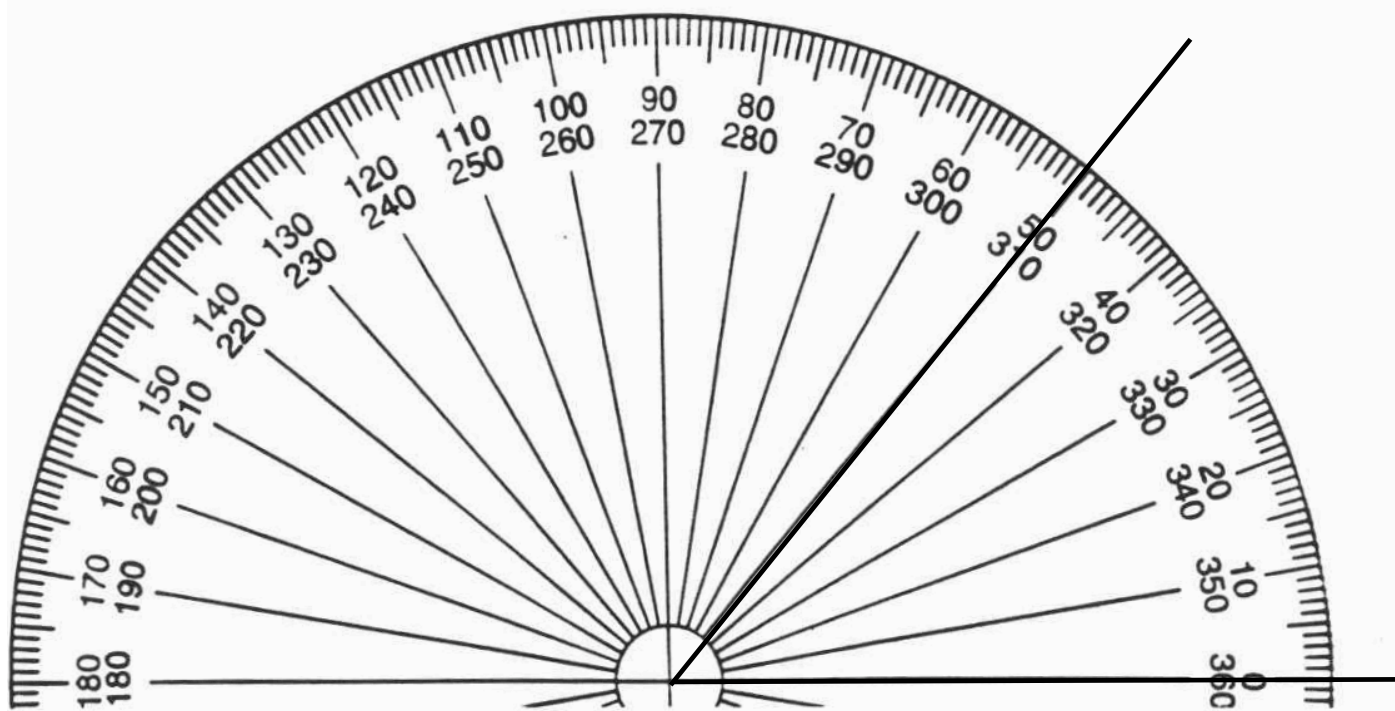
Enter Guess:

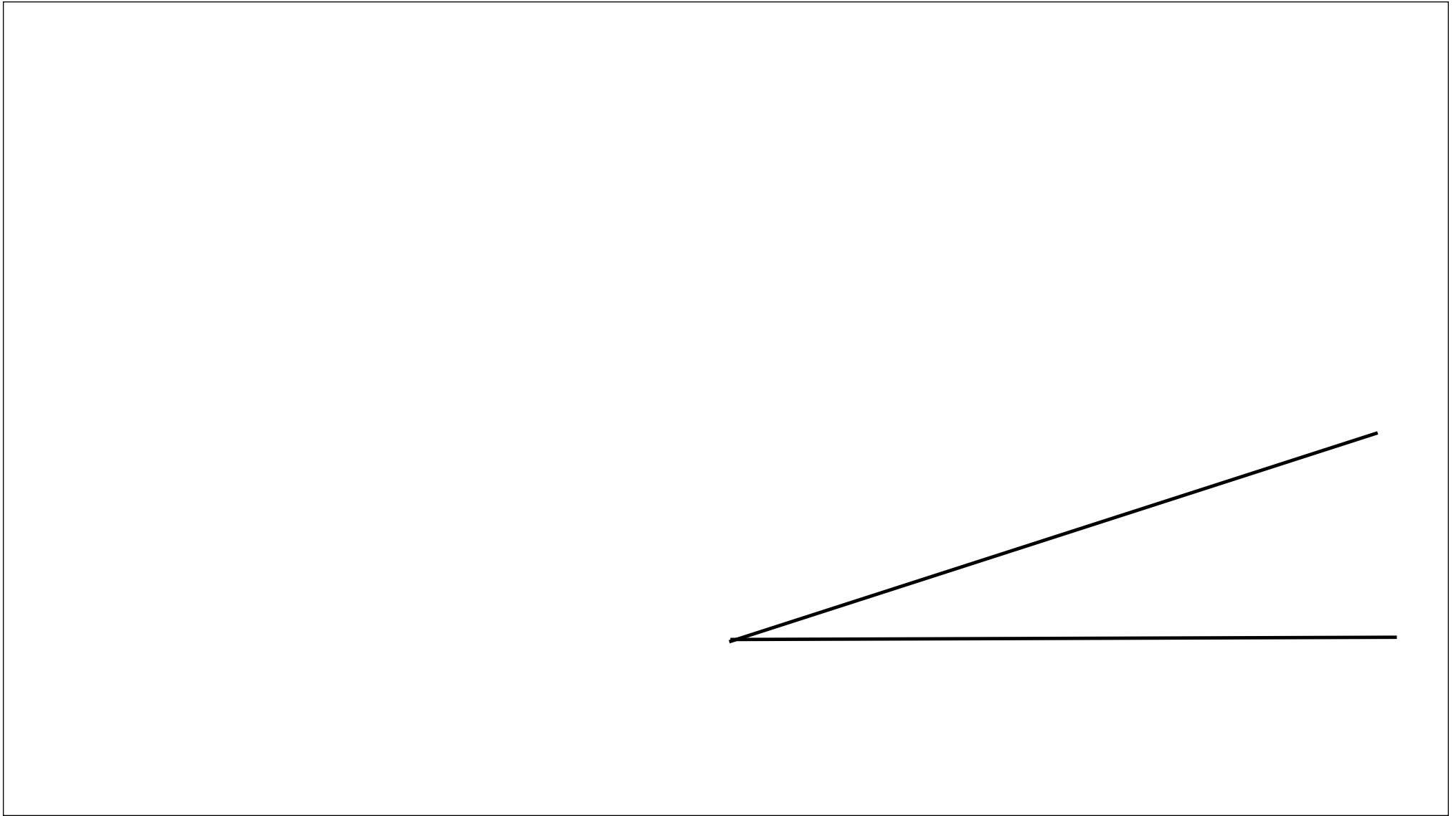
Enter Name (opt):

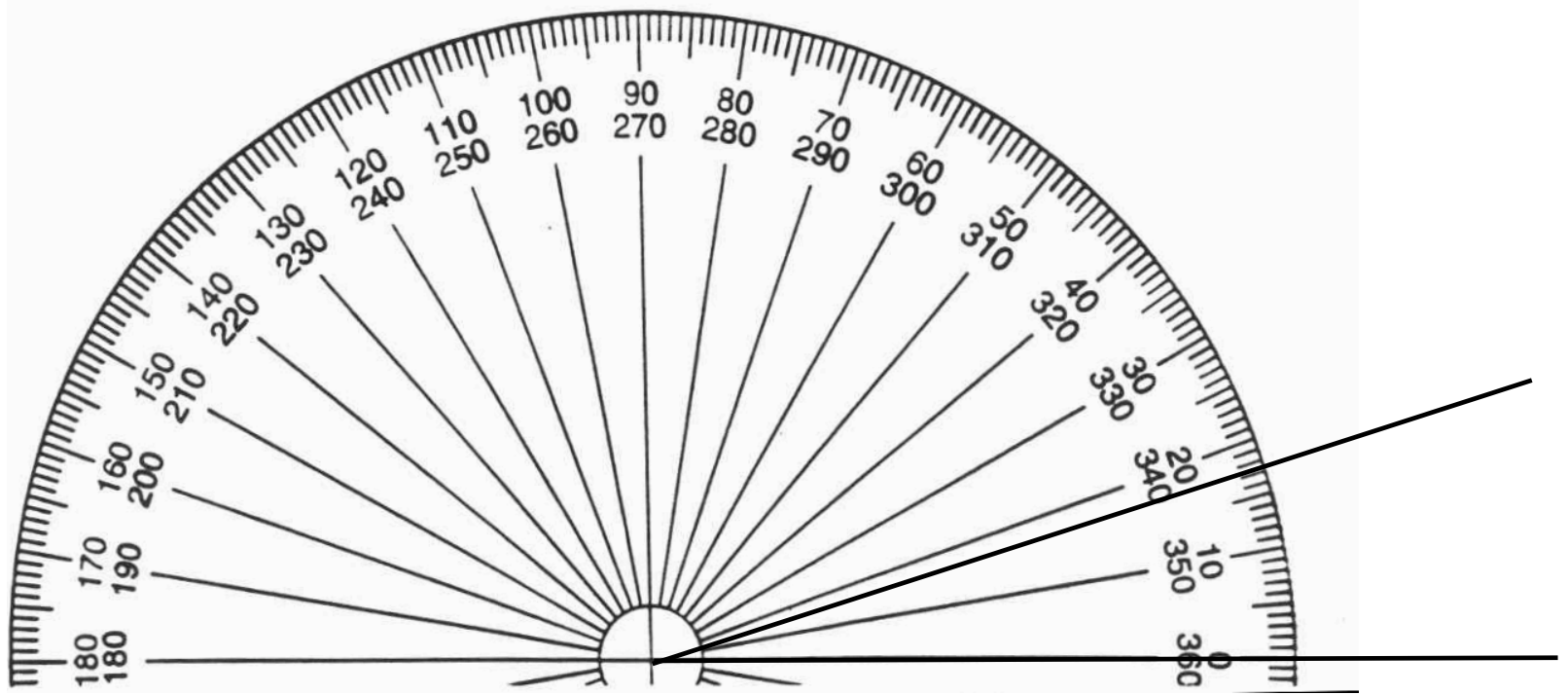


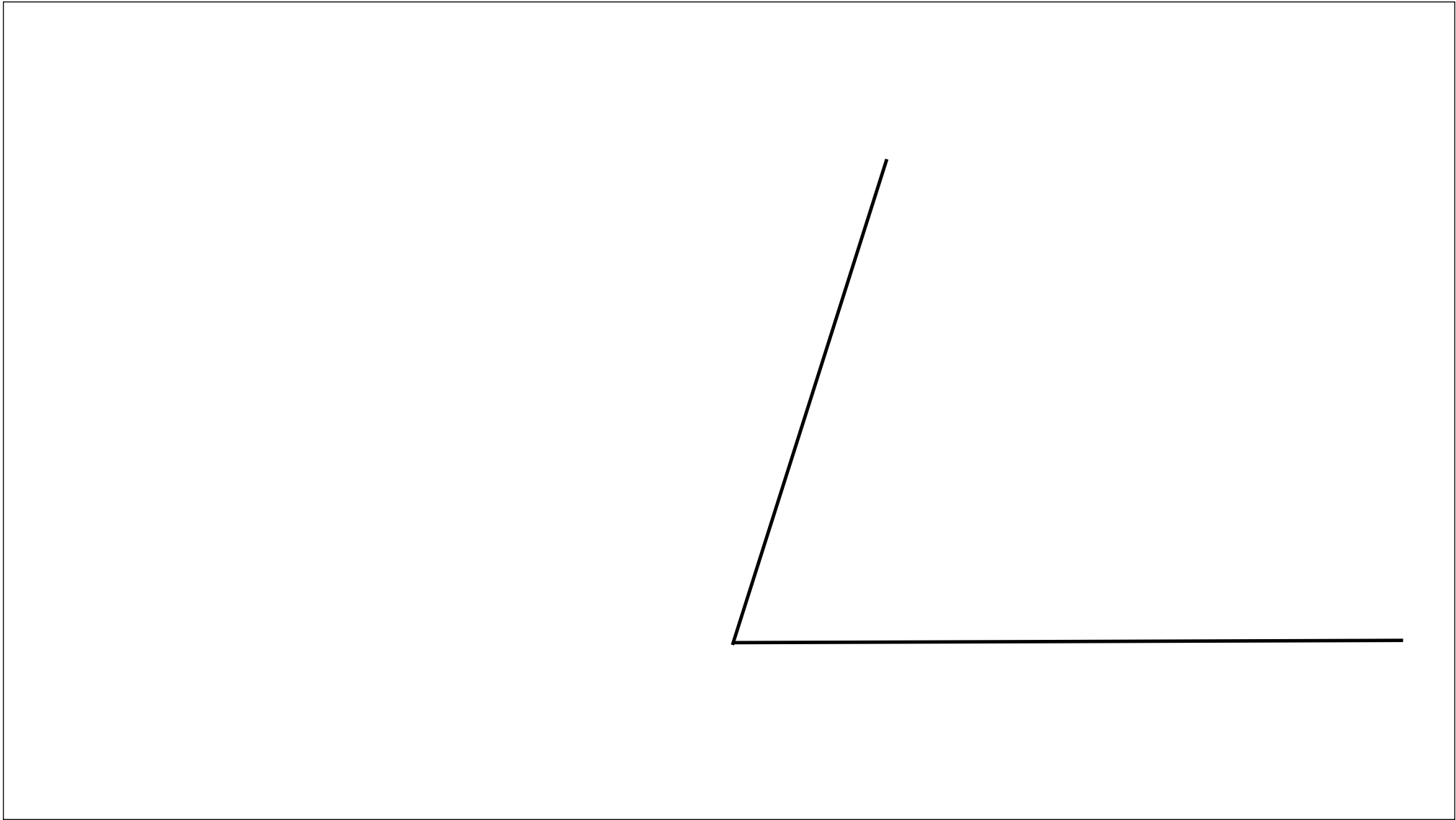


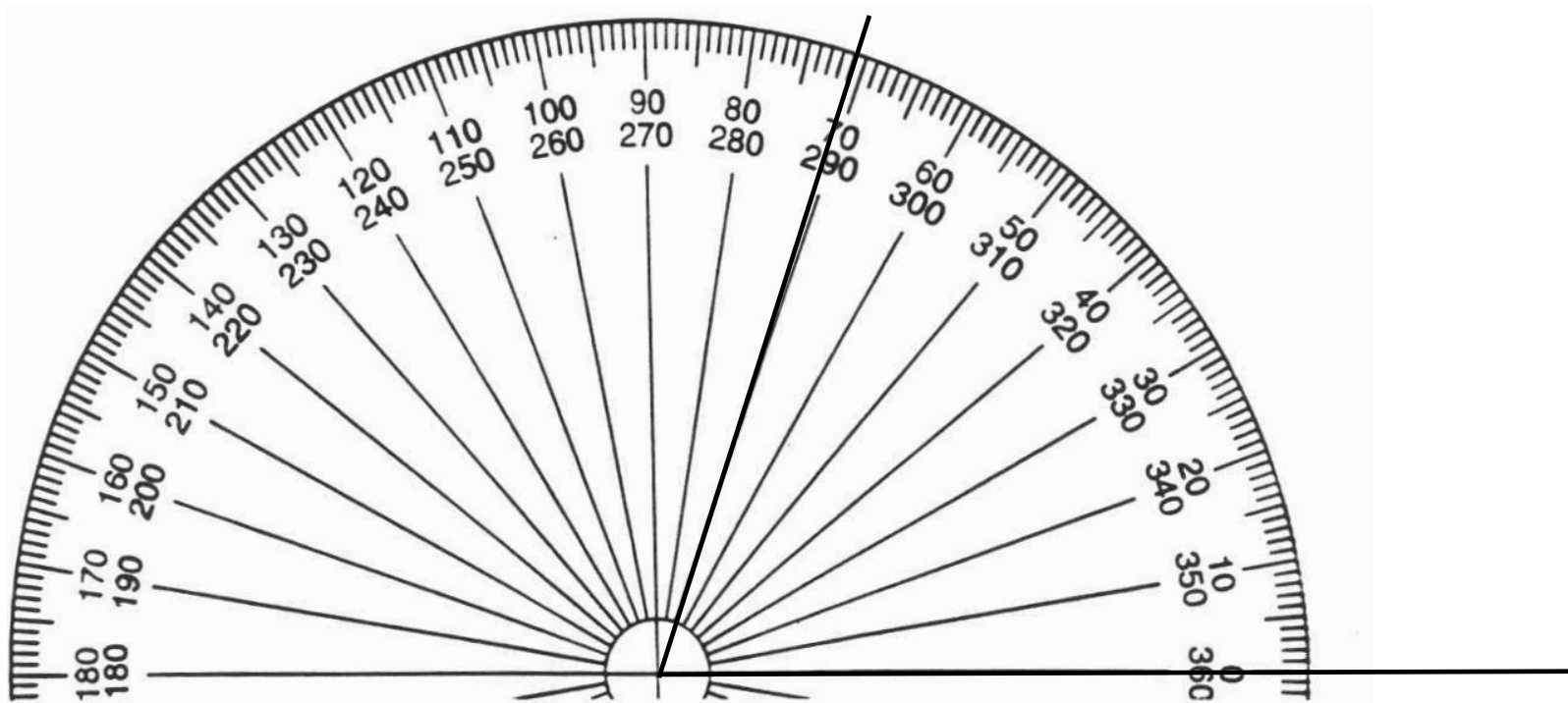












```
import logging
import pickle
from google.appengine.ext import db
from core.tool import ToolRegistration
from core import learningportlet

class Wisdom(db.Model) :
    blob = db.BlobProperty()

def register():
    return ToolRegistration(WisHandler, "Wisdom of Crowds")

class WisHandler(learningportlet.LearningPortlet):

    def doaction(self):
        wisdom = Wisdom.get_or_insert("a", parent=self.context.course)
        if wisdom.blob == None :
            wisdom.blob = pickle.dumps( dict() )
            wisdom.put()
        data = pickle.loads(wisdom.blob)

        name = self.request.get("name")
        if len(name) < 1 : name = self.context.user.email
        guess = self.request.get("guess")
        try: guess = int(guess)
        except: guess = -1
```

90 lines
of
Python



```

msg = ""
if self.context.isInstructor() and name.lower() == "reset":
    data = dict()
    wisdom.blob = pickle.dumps( data )
    wisdom.put()
    msg = "Data reset"
elif guess < 1 :
    msg = "Please enter a valid, numeric guess"
elif len(name) < 1 :
    msg = "No Name Found"
elif name in data :
    msg = "You already have answered this"
else:
    ret = db.run_in_transaction(self.addname, wisdom.key(), name, guess)
    if ret :
        data = ret
        msg = "Thank you for your guess"
    else:
        msg = "Unable to store your guess please re-submit"

return msg

def getview(self, info):
    wisdom = Wisdom.get_or_insert("a", parent=self.context.course)
    if wisdom.blob == None :
        wisdom.blob = pickle.dumps( dict() )
        wisdom.put()

```

90 lines
of
Python



```
data = pickle.loads(wisdom.blob)
rendervars = {'context': self.context, 'msg' : info}

if self.context.isInstructor() and len(data) > 0 :
    text = ""
    total = 0
    for (key, val) in data.items():
        text = text + key + "," + str(val) + "\n"
        total = total + val
    count = len(data)
    ave = 0
    if count > 0 : ave = total / count
    rendervars["ave"] = ave
    rendervars["count"] = count
    rendervars["data"] = text
return self.doRender('index.htm', rendervars)
```

```
def addname(self, key, name, guess):
    obj = db.get(key)
    data = pickle.loads(obj.blob)
    if ( len(data) > 499 ) : return data
    data[name] = guess
    obj.blob = pickle.dumps(data)
    obj.put()
    return data
```

90 lines
of
Python



```
<p>Hello: {{ context.getUserName }}
{% if context.isInstructor %}
(Instructor)
{% endif %}
from {{ context.getCourseName }}</p>
{% if msg %}
<p>{{ msg }}</p>
{% endif %}
<form method="post" action="{{ context.getPostPath }}">
{{ context.getFormFields }}
<p>Enter Guess: <input type="text" name="guess"/></p>
<p>Enter Name (opt): <input type="text" name="name"/></p>
<p><input type="submit"></p>
</form>
{% if ave %}
<p>Average: {{ ave }} Count: {{count}} </p>
{% endif %}
{% if data %}
<pre>
{{ data }}
</pre>
{% endif %}
```

25 lines
of HTML





CloudCollab Goals

- Tool Building Environment - aimed at beginning developers
- Written in Python, Free, Open Source
- Hostable on Google AppEngine for Free
- Supports IMS Learning Tools Interoperability - Multi Tenancy
- All tools run without modification in iframe, portal, div, CloudSocial, Facebook, Yahoo!, iGoogle, WSRP,



Building Web Applications



Using

Google App Engine

O'REILLY®

Charles Severance



```
<script type="text/javascript"
  src="http://api.cloudsocial.org/js/ile-main.js">
</script>
<script type="text/javascript">
  ile_init("49c480149a008");
</script>
```



The screenshot shows a web browser window with the URL <http://www.pythonlearn.com/>. The page title is "PythonLearn - Self-paced learning Python". The navigation menu includes links for "Book", "Software", "Informatics", "Instructor", "Python", and "About".

The main content area features a "New" section with a link to "Learning Google Application Engine www.appenginelearn.com". Below this is a paragraph of text: "For the best effect to learn Python on your own, you should purchase the [textbook](#) and go through the materials in order. If you want to attempt the programming assignments make sure to install the appropriate [software](#) on your system. Installation instructions are provided under the 'Software' tab." Another paragraph follows: "This site should not be a substitute for a course you are taking - even if the course you are taking is using the same textbook. Each course and each instructor will take their own app".

A "Wiscrowd" advertisement is visible, showing a "Hello: Joe User from IN101" message and a form with "Enter Guess:" and "Enter Name (opt):" fields, a "Submit" button, and a "grab | close" link. To the right of the form is a portrait of a man in a suit.

Below the form, there is a "Basic Python" section with a list of links: "Writing Simple Programs (and [Assignment Data](#))", "Computing with Strings (C[through a file](#))", "Decision Structures (Chap[Through a File Again](#))", and "Computers and Programs [who has the most commits](#)".

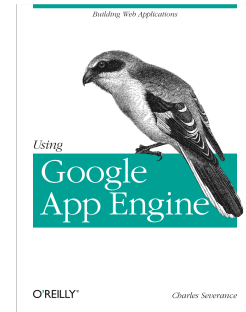
At the bottom right, there are links for "Assignment 1 - Getting Started", "Assignment 2 - Reading", "Assignment 3 - Reading", and "Assignment 4 - Figuring out". A footer note says "Powered by [CloudSocial](#)".

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<< back to portal

[CloudCollab](#)

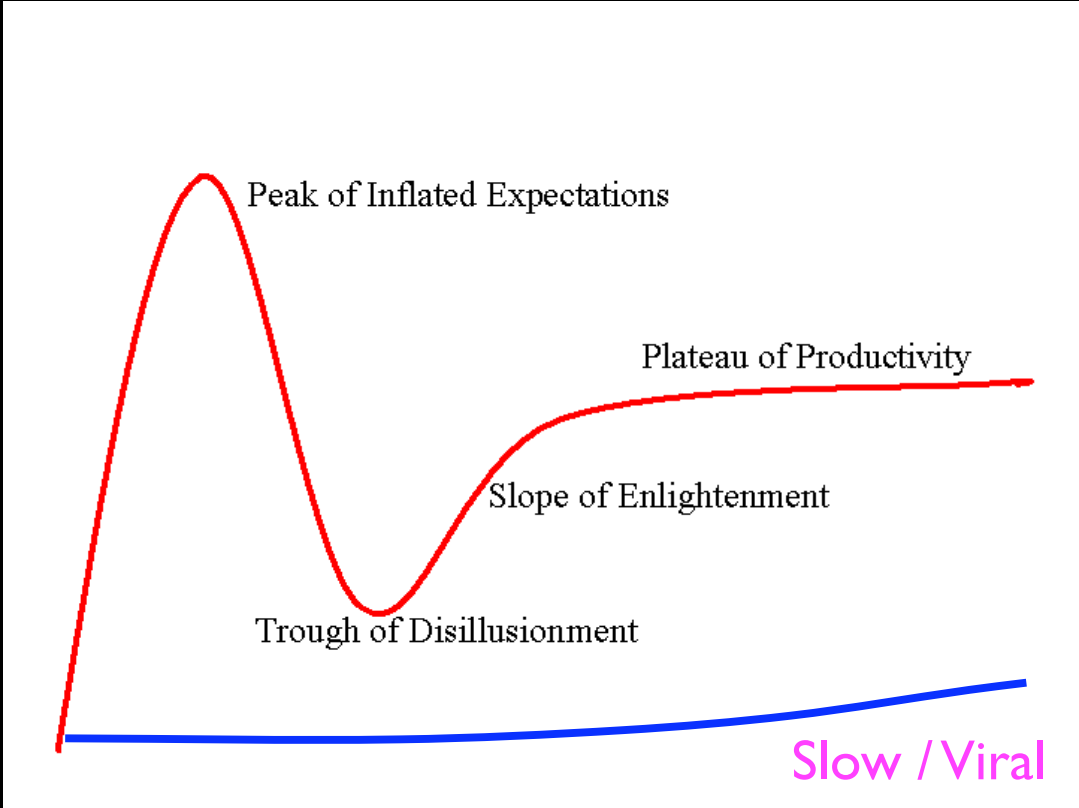
[Logout \(drchuck\)](#)

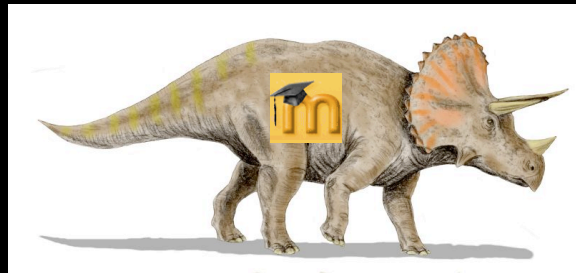
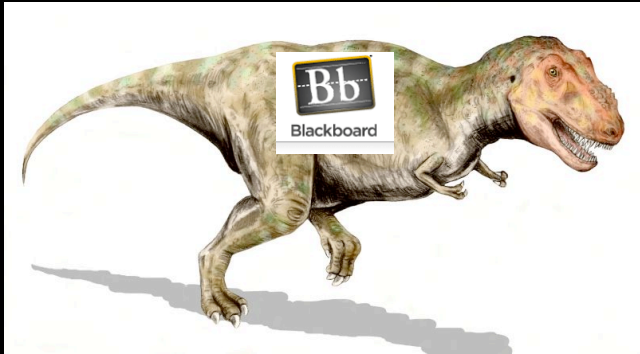
Hello: drchuck (Instructor) from SI101



Enter Guess:

Enter Name (opt):





PythonLearn - Self-paced learning Python

http://www.pythonlearn.com/ RSS Google

PythonLearn [Book](#) [Software](#) [Informatics](#) [Instructor](#) [Python](#) [About](#)

New: Learning Google Application Engine www.appenginelearn.com

For the best effect to learn Python on your own, you should purchase the [textbook](#) and go through the materials in order. If you want to attempt the programming assignments make sure to install the appropriate [software](#) on your system. Installation instructions are provided under the "Software" tab.

This site should not be a substitute for a course you are taking - even if the course you are taking is using the same textbook. Each course and each instructor will take their own approach.

Wiscrowd grab | close

Hello: Joe User from IN101

Enter Guess:

Enter Name (opt):

- Writing Simple Programs (and [Assignment Data](#))
- Computing with Strings (C [through a file](#))
- Decision Structures (Chap [Through a File Again](#))
- Computers and Programs [who has the most commits](#)

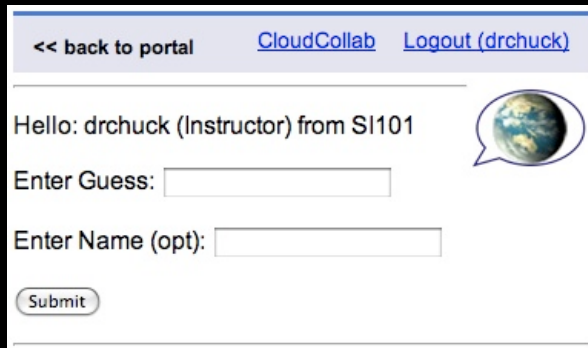
[Assignment 1 - Getting Started](#), [Assignment 2 - Reading](#), [Assignment 3 - Reading](#), [Assignment 4 - Figuring out](#)

Powered by [CloudSocial](#)



www.cloudsocial.org

```
<script type="text/javascript"
  src="http://api.cloudsocial.org/js/ile-main.js">
</script>
<script type="text/javascript">
  ile_init("49c480149a008");
</script>
```



www.cloudcollab.com

www.appenginelearn.com



Thank you

www.dr-chuck.com