



# Teaching Internationalization Internationally

Jesse M. Heines

Dept. of Computer Science University of Massachusetts Lowell, Lowell, MA, USA

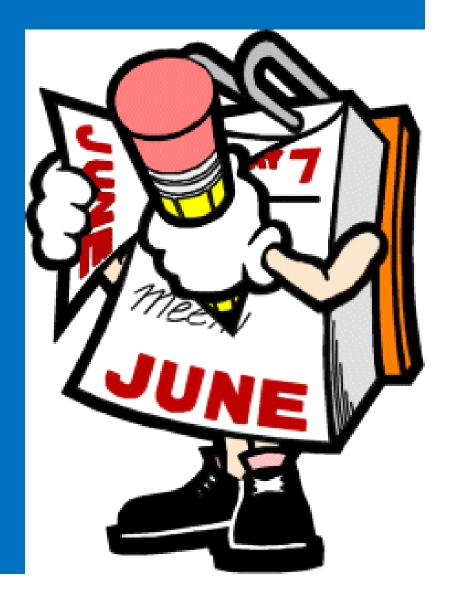
Krzysztof Jassem

Faculty of Mathematics and Computer Science Adam Mickiewicz University, Poznań, Poland

A simple example

**USA:** July 1, 2013

Europe: 1 July 2013



A simple example

USA: July 1, 2013

Europe: 1 July 2013

USA: 7.1.2013 or 7/1/2013

Europe: 1.7.2013 or 1/7/2013

A simple example

USA: July 1, 2013

Europe: 1 July 2013

USA: 7.1.2013 or 7/1/2013

Europe: 1.7.2013 or 1/7/2013

ISO8601: 2013-07-01

but not: 2013-7-1

#### Other Concerns

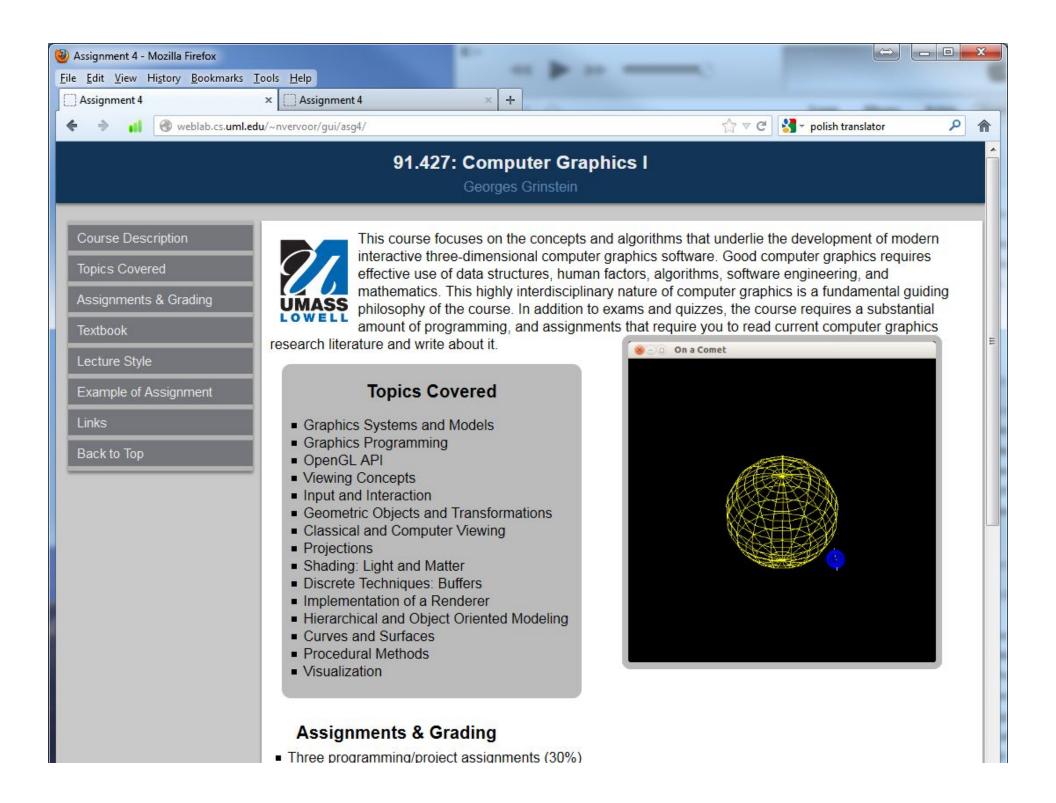
- Spelling: colour vs. color, theatre vs. theater
- Units of Measure: meters vs. feet
- Forms of Address: PhD vs. dr, Mr./Ms. vs. p.
- Word Ambiguities: dinner vs. lunch
- Translation Problems: particularly idioms
- Local Customs: driving on the left or right
- Symbols: ৫0 ※ ☑区

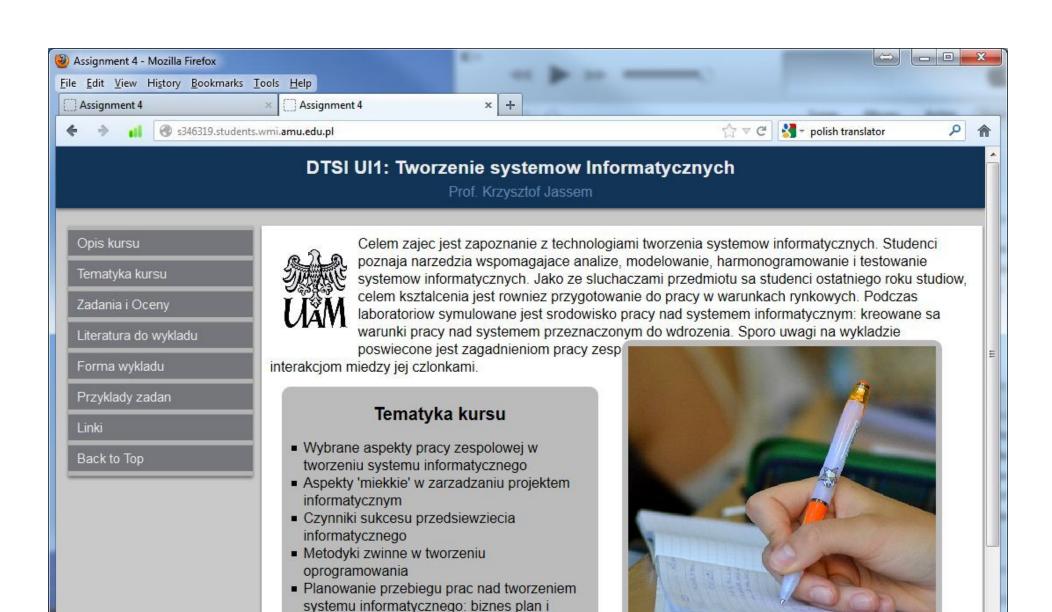
# Importance to Software Development

- the ubiquity of the web
- the universality of the browser
- the common need for translation
- the emergence of international software development teams
- in short, the "global village"









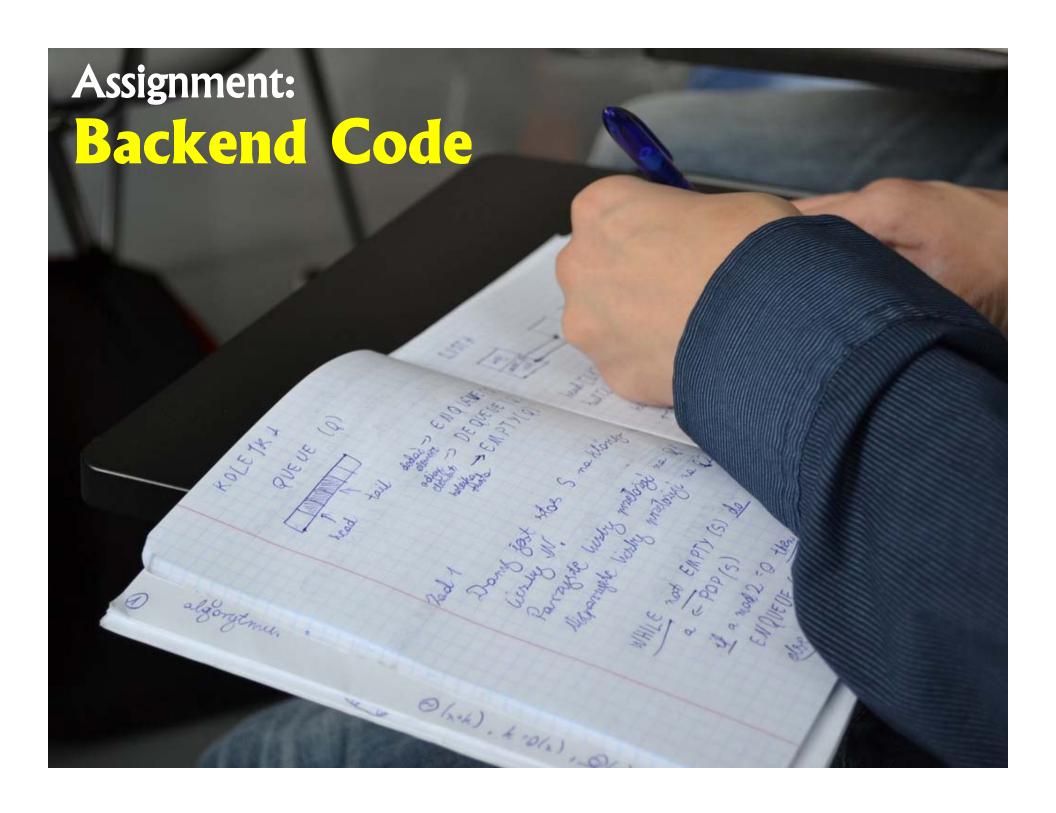
harmonogram

Przypadki uzycia

Testowanie aplikacji
 Uzytecznosc aplikacji
 Interfejs uzytkownika
 Integracja cjagla

Zakres systemu informatycznego

Modelowanie systemu informatycznegoProjektowanie systemu informatycznego



```
var root = {
 "title": "Computer Graphics I",
"instructor": "Georges Grinstein",
"instructorURL": "http://www.uml.edu/Sciences/
    computer-science/faculty/grinstein-georges.aspx",
 "coursenum": "91.427",
"prerege": "91.201 Computing III",
"credits": "3",
"description": "This course focuses on the concepts
    and algorithms that underlie modern, interactive
    three-dimensional computer graphics software.
    ... ",
"textbook": {
  "title": "Interactive Computer Graphics: A Top-
      Down Approach with Shader-Based OpenGL",
  "edition": "6th",
  "author": "Edward Angel, Dave Shreiner",
  "isba": "9780132545235"
```

```
var root = {
 "title": "Tworzenie systemow Informatycznych",
"instructor": "Prof. Krzysztof Jassem",
"instructorUKL": "http://psi.amu.edu.pl/pl/
    index.php?title=Krzysztof Jassem",
 "coursenum": "DTSI UI1",
"preregs": "None",
"credits": "4",
"description": "Celem zajec jest zapoznanie z
    technologiami tworzenia systemow informatycznych.
    Studenci poznaja narzedzia wspomagajace analize,
   modelowanie, harmonogramowanie i testowanie
    systemow informatycznych. ... ",
"textbook": {
   "title": "Analiza i projektowanie systemow
      informatycznych",
  "edition": "1st",
  "author": "Jacek Plodzien, Ewa Steposz",
   "isbn": "not known"
```

#### Follow-Up: Live Interaction Lecture at 4:00 AM EST



Krzysztof

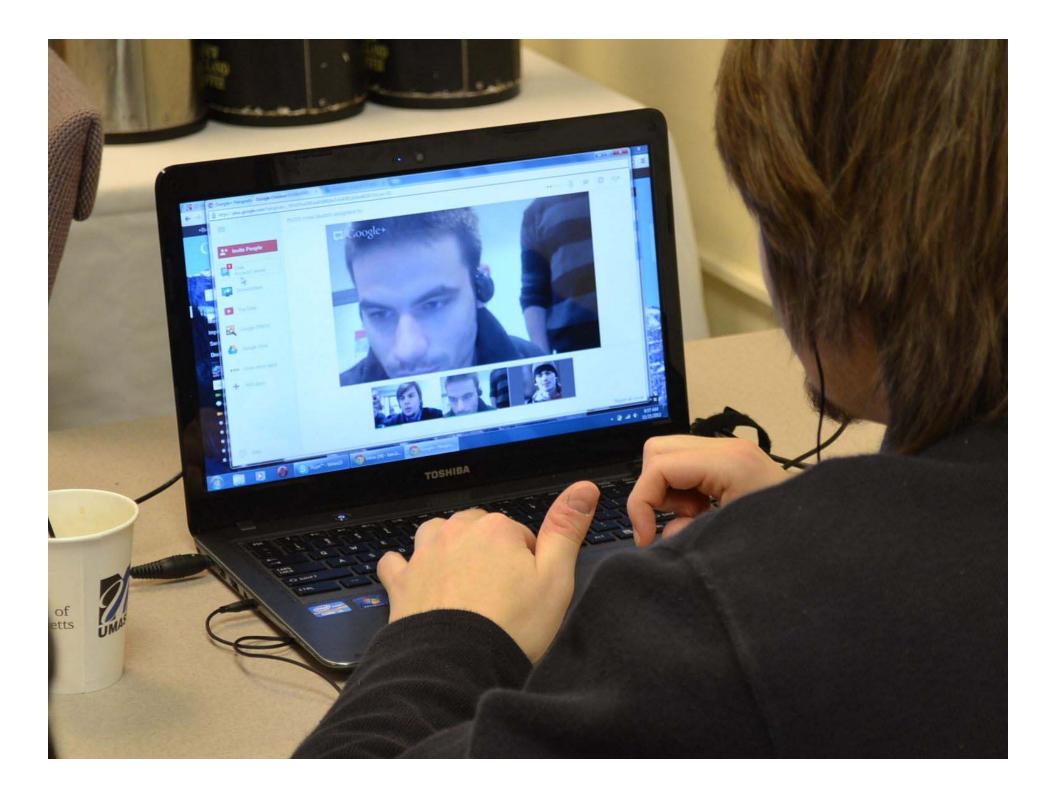












will be subbing for Danjelle's Pilates clas

Il Illand Lawell Maurel ina Metahar Ol

Daniel Koziatek



More

Daniel: Zapraszam Cię na hangout. Join hangout

Sent at 8:31 AM on Wednesday

Daniel: Zapraszam Cię na hangout.

Sent at 8:37 AM on Wednesday

year, mars me one, hold on

Sent at 8:40 AM on Wedne

me: so the json file is here

http://weblab.cs.um/.edu/-

<u>leu son/a4 content json</u>

you edit it and send it back me, and I will put it on the s

Manuel: Okey

Thank you 😅

we start to do it right now

### Representative Chat #1

- **P:** I'm so happy that we can talk.
- A: Yes, me too. It looks like everything worked great!
- **P:** Yes, but there are not Polish characters. You should change for UTF-8.
- A: The page is set up for that I think it's a problem with the web server.
- **P:** No, we will send you again.
- A: Could you try saving the file with Unicode encoding?
- **P:** We've made mistake. Now it will be better.
- A: Great. All of the characters display correctly now I think they saved it as you said, using UTF-8.
- **P:** It's okay, awesome. We have to go now next lecture is going right now. So, we will talk to you later.
- 19A: Ok, it was good talking to you!

### Representative Chat #2

- **P:** We have just sent you a JSON file from [name suppressed] email. Could you check if it works?
- A: Oh, I found it. It was in my Spam folder.
- **P:** We find your code amazing. Unfortunately your codepage doesn't work with multilingual documents.
- A: Yes, I need to fix that.
- **P:** We can send you UTF-8 version, since our text editor is set to save in ANSI by default which isn't too good.
- A: Either works. I think my webpage is just not telling the web browser the content type.
- P: We sent you upgraded version of our first JSON file (Polish characters should now work correctly) and other JSON file with information on the project we mentioned. Could you check on our English and upgrade it accordingly if there are mistakes?

#### Representative Chat #2 (cont'd)

A: Yes, I can.

**P:** Since we get our grade basing on the validity of the links to your site, please don't delete it too fast.

A: OK, I won't.

**P:** Thanks m8!

A: Looks much better now. I am going to add a few features to my JavaScript to make your midterm a better user experience and hopefully give you a better grade

P: Thank you!

A: No problem.

**P:** Thanks for cooperation, we are going to dinner! Bye.

A: You're welcome. Bye.



#### On the Lecture

- In the beginning, hard to understand what was hidden behind the words "human factor." But when we got into it, I must say it was really interesting point of view on web programming.
- First of all, he speaks very clearly so the language barrier disappeared it was very important to me.
- I found this lecture great! ... Every time we see something new, it's interesting, stunning and amazing. Well, it was this time as well.
- This amazing American style of teaching made it interesting.
- I really appreciate [him] waking up so early just to say some words to Polish students (who are very hard to work with and it's almost impossible to communicate with them).

#### On the Class

- Class was a total disaster. We were supposed to [connect] with other students from USA. None of this worked. Exercises made no sense. Not clear enough. Templates made by these USA students were not complete at all.
- Class exercise dominated by communication problems. It should have been a little bit better prepared.
- Class with assignments was a little bit unsuccessful but still, a good idea. Cooperating with other students and their code this way was nice exercise.
- As for class, I also liked it very much. Our task was simple, yet it required from us to do some work and research. Unluckily our group didn't have a chance to talk with American students. All in all our last class was great!

#### Conclusions

- Do not be overly ambitious. It's fine to start small.
- Start early. There are lots of kinks to work out.
- Plan an activity that will have a life beyond the immediacy of the live connection experience.
- Try to schedule the live connections session so that students can continue working together immediately after the formal class has concluded.
- Google Hangout worked best for us because it allows sharing a single window rather than an entire screen.
- Offer free food and a reasonable number of students will volunteer to participate at almost any time of day! ©





# Hielik You

Jesse M. Heines

Dept. of Computer Science University of Massachusetts Lowell, Lowell, MA, USA

#### Krzysztof Jassem

Faculty of Mathematics and Computer Science Adam Mickiewicz University, Poznań, Poland

## Thank You to Jesse's UAM Hosts

- Prof. dr. habil. Roman Murawski
  - Faculty of Mathematics and Computer Science
- dr. Jacek Marciniak
  - Faculty of Mathematics and Computer Science
- Prof. dr. habil. Jacek Witkoś
  - Deputy President for Research and International Cooperation

