

Advanced Web Design Studio

No screens



Prof. Lydia Chilton
COMS 6998
7 September 2018

Say your name



Staff

- Prof. Lydia Chilton
 - Office hours: Tuesday 4-5
- TAs:
 - Katy Gero
 - Savvas Petridis
- Course website:
 - <http://www.columbia.edu/~lc3251/courses/fall18/>

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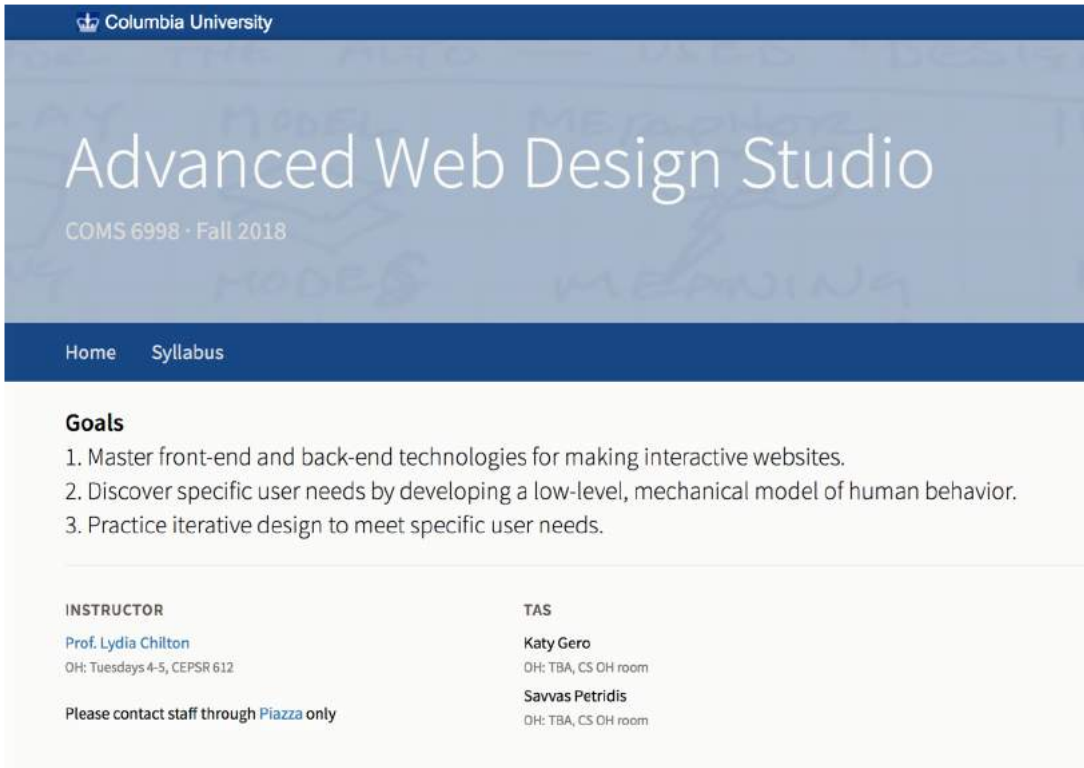
Say your name





You already know front-end web dev:
HTML, JavaScript, Bootstrap, jQuery

And design:
Iterative design, critique



You will learn back-end web dev:

- Server-side programming (Flask),
- Databases (Sqlite, SQLAlchemy)
- Real-time Communication (Socket.IO)

And practice web design by:

- Rebuilding IMDB.com
- Rebuilding twitter
- Pursuing your own project

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What is a studio class?







Not a studio class



Why we do teach some topics in a studio?



Painting



Architecture



Acting

What are other topics we learn through applying skills and receiving feedback?

What are other topic we learn through apply techniques and receiving feedback?



Sports



Languages



Cooking

In this class,
the staff will set high-level goals.

We will support you in achieving them by:

- 1) setting deadlines
- 2) providing feedback
- 3) creating a supportive environment of peers

Grading is largely based on effort

In-class participation 20%

Weekly turn-ins 60%

Final Project 20%

Grading is largely based on **effort**

In-class participation 20%

Attendance is mandatory. Any absence, excused or otherwise, must be made up. It is the student's job to coordinate make up sessions within 6 days of the absence.

Weekly turn-ins 60%

Final Project 20%

Grading is largely based on **effort**

In-class participation	20%	Attendance is mandatory. Any absense, excused or otherwise, must be made up. It is the students job to coordinate make up sessions within 6 days of the absence.
Weekly turn-ins	60%	Every week student will write up their goals for the week, how they iterated toward the goals, and a report of their progress on each goal. There are 13 weeks of class and 12 turn-ins. Each turn-in is worth 5% of your final grade.
Final Project	20%	

Grading is largely based on **effort**

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Weekly turn-ins	60%	Every week student will write up their goals for the week, how they iterated toward the goals, and a report of their progress on each goal. There are 13 weeks of class and 12 turn-ins. Each turn-in is worth 5% of your final grade.
Final Project	20%	The final project may be done individually or in groups of 2.

Objectives

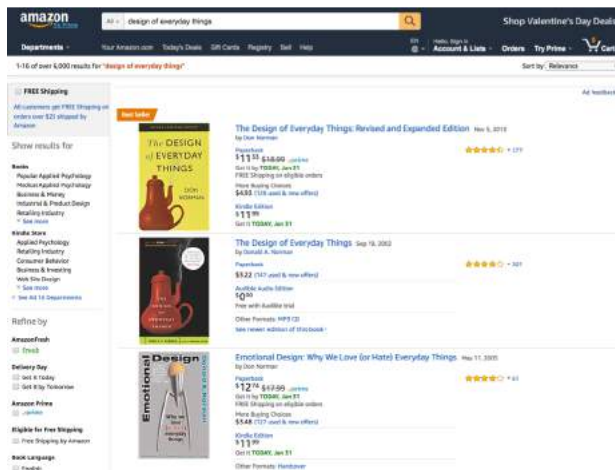
1. **Master front-end and back-end** technologies for making interactive websites.
2. **Discover specific user needs** by developing a low-level, mechanical model of human behavior.
3. **Practice iterative design** to meet specific user needs.

User Interface Design Review

Prof. Lydia Chilton
COMS 4170

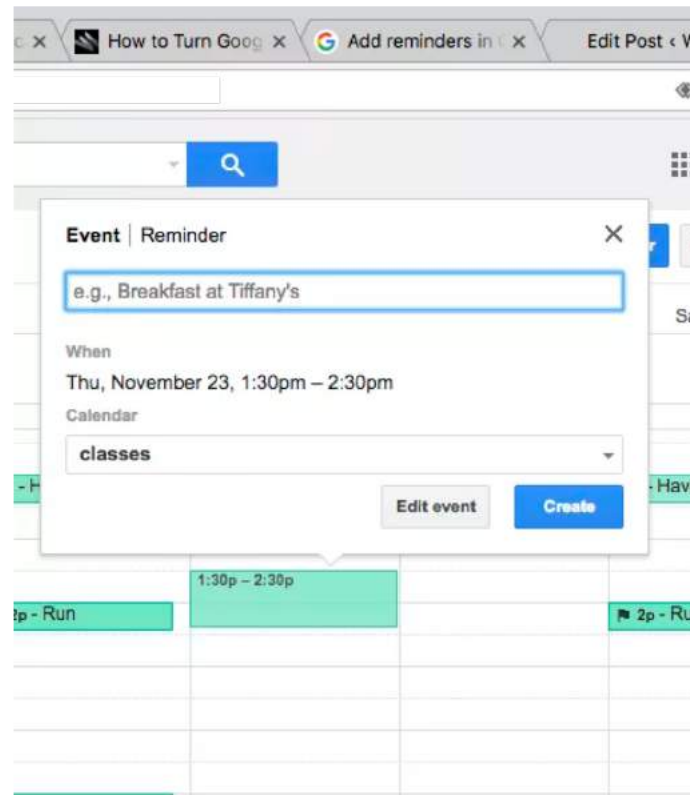
Users interact with a system to accomplish a goal

Amazon



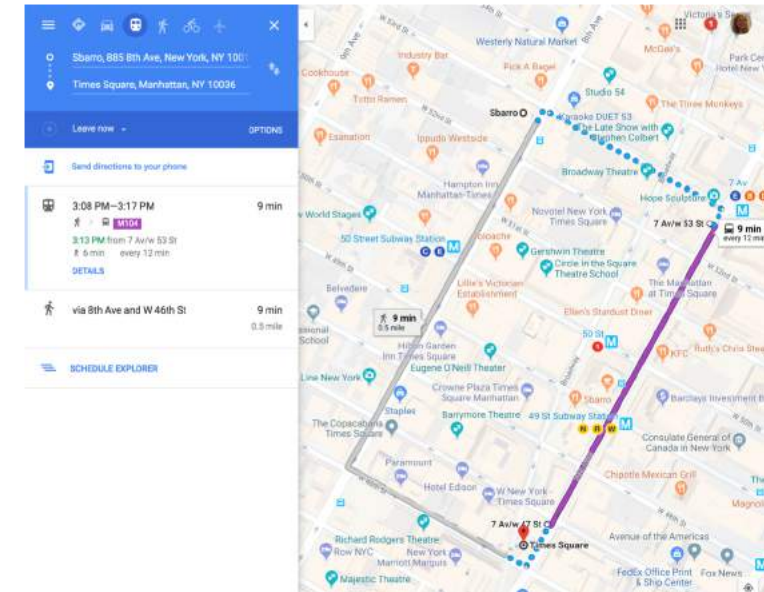
Buy a book

Google Calendar



Get to events on time

Google Maps



Get to a place

User goals must be concrete.

Grand but not actionable

“combat social inequality”

“bring the world closer
together”

“scale and democratize
education”

User goals must be concrete.

Grand but not actionable

“combat social inequality”

“bring the world closer together”

“scale and democratize education”

Humble but actionable

“register 100 voters in Selma, Alabama”

“let Harvard students see what dorm their friends are in”

“teach my 12-year old cousin Nadia how to multiply fractions”

User Interfaces should be designed to help users accomplish a goal.

Guide users' attention



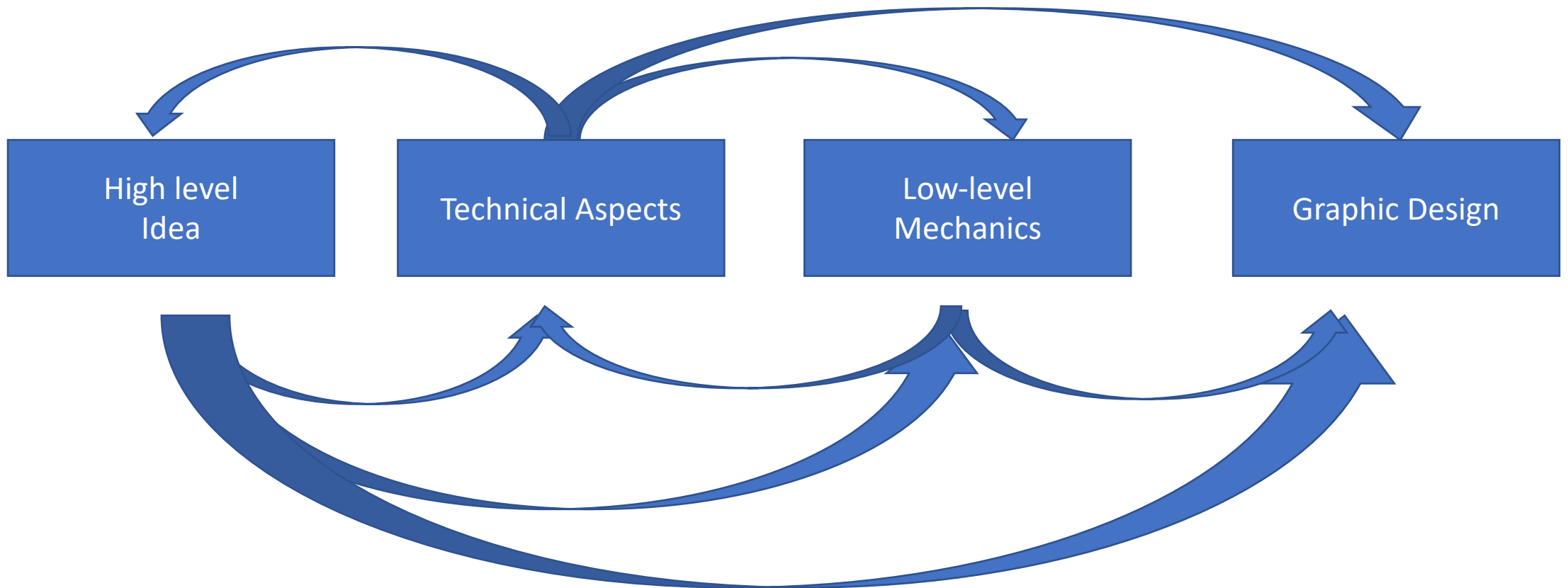
Provide clear actions and feedback.



Allow users to navigate through the system in ways that follow from their goal.

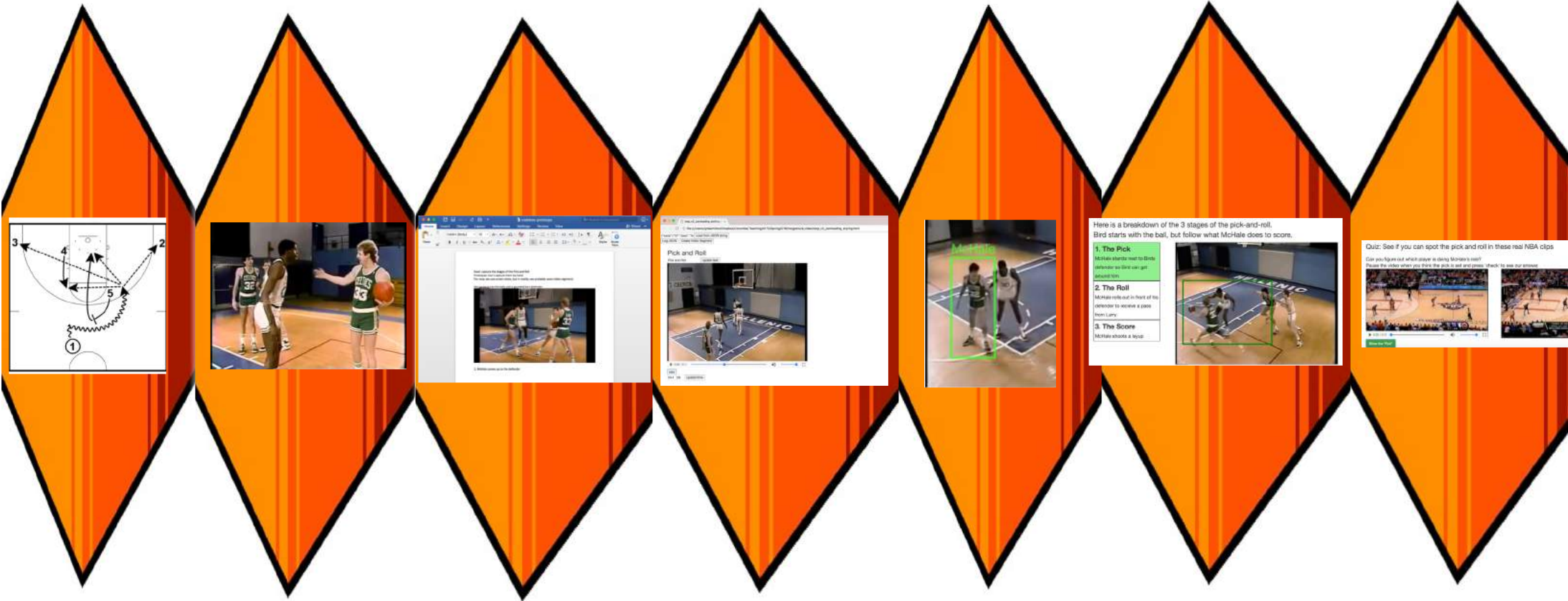


Design is hard because it requires synthesizing many elements that are dependent on each other.



We use iteration to minimize risk by prototyping the riskiest elements first.

Idea:
Help NBA fans
Recognize the
strategy
during games



Idea

Resources

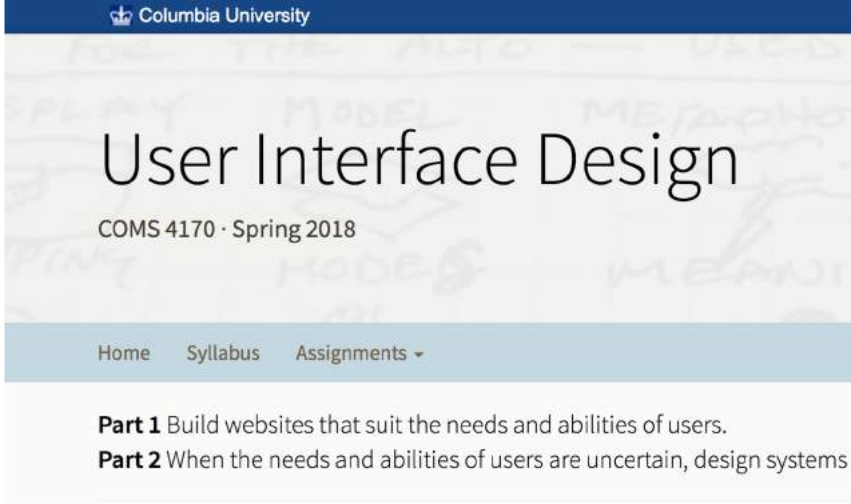
Design

Technical

Design

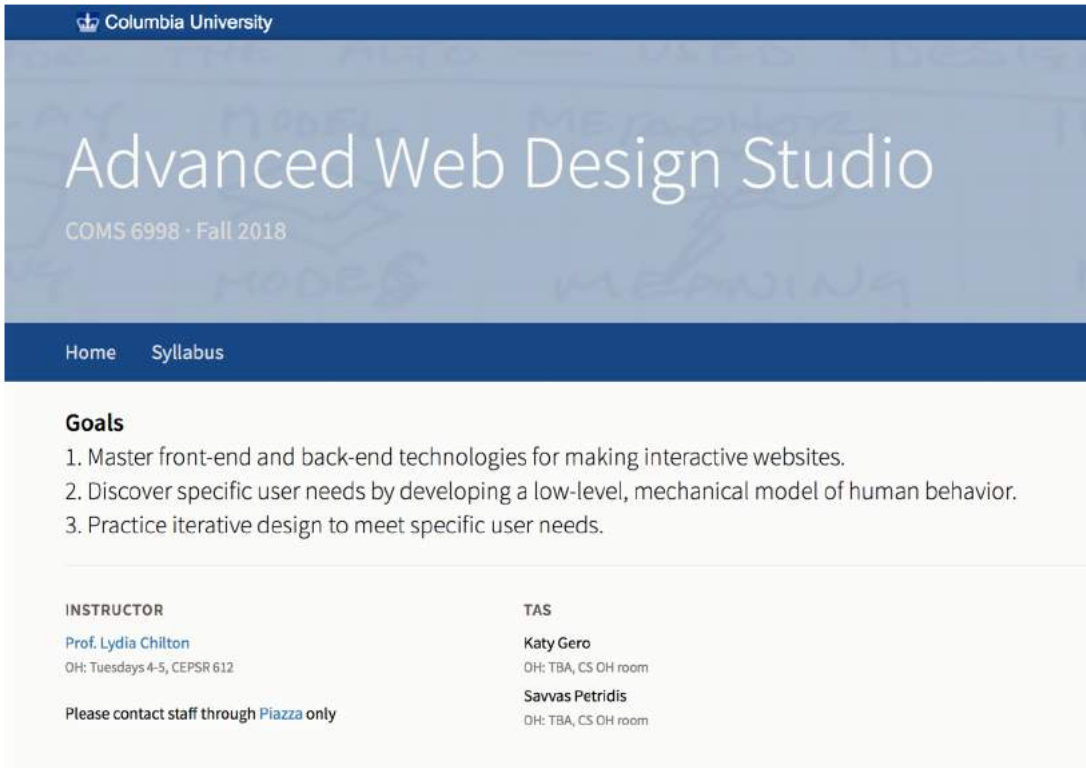
Idea

Design



You already know front-end web dev:
HTML, JavaScript, Bootstrap, jQuery

And design:
Iterative design, critique



You will learn back-end web dev by:

- Rebuilding IMDB.com
- Rebuilding twitter
- Pursuing your own project

Rebuilding IMDB.com



All



IMDbPro

Help

Movies, TV
& ShowtimesCelebs, Events
& PhotosNews &
Community

Watchlist

f Sign in with Facebook

Other Sign in options



5 TIFF Films That Could
Be Oscar Contenders
Movies to Watch



"The IMDb Show"
Catch Up With Anya Taylor-Joy



Halloween
Chilling New Trailer

[Browse trailers »](#)

Get Ready for the Toronto International Film Festival

Visit our [Guide to TIFF](#) to learn more about the films we're excited to see. Plus, check out our in-studio interviews, celebrity galleries, mini-guides, and more!



Our Helpful Hacks to Get You Through TIFF
2018

[How to have the best time at TIFF »](#)

Back in the Day: Actors' Early Roles

Opening This Week

- | | |
|-----------------------------|-----------------------------|
| + The Nun | Get Tickets |
| + Peppermint | Get Tickets |
| + God Bless the Broken Road | Get Tickets |
| + The Apparition | Get Tickets |
| + Bisbee '17 | Opens 9/5 |
| + Winter Ridge | Opens 9/5 |

[See more opening this week »](#)[Get Tickets & Showtimes »](#)

Now Playing (Box Office)

- | | |
|---|-----------------------------|
| + Crazy Rich Asians
\$22.0M | Get Tickets |
| + The Meg
\$10.5M | Get Tickets |
| + Mission: Impossible - Fallout
\$7.0M | Get Tickets |
| + Searching
\$6.1M | Get Tickets |
| + Operation Finale
\$6.0M | Get Tickets |

[See more box office results »](#)

FULL CAST AND CREW | TRIVIA | USER REVIEWS | IMDbPro | MORE  SHARE

 **Crazy Rich Asians** (2018)  **7.6** 17,668  Rate This

PG-13 | 2h | Comedy, Romance | 15 August 2018 (USA)



2:25 | Trailer

11 VIDEOS | 59 IMAGES



Get Showtimes & Tickets

In 29 theaters near Newyork NY US [\[change\]](#)

This contemporary romantic comedy, based on a global bestseller, follows native New Yorker Rachel Chu to Singapore to meet her boyfriend's family.

Director: [Jon M. Chu](#)

Writers: [Peter Chiarelli](#) (screenplay by), [Adele Lim](#) (screenplay by) | [1 more credit](#) »

Stars: [Constance Wu](#), [Henry Golding](#), [Michelle Yeoh](#) | [See full cast & crew](#) »

 **74** **Metascore**
From [metacritic.com](#)

Reviews
383 user | 130 critic

 **Popularity**
2

Videos



How TIFF Gets the Oscars Right



Find out how the [Toronto International Film Festival](#) has become a predictor of Best Picture at the Academy Awards over the years.

[Watch now](#) »

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[The Surprising Inspiration Behind Henry Golding's Character in A Simple Favor](#)
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1 hour ago | [Variety](#)

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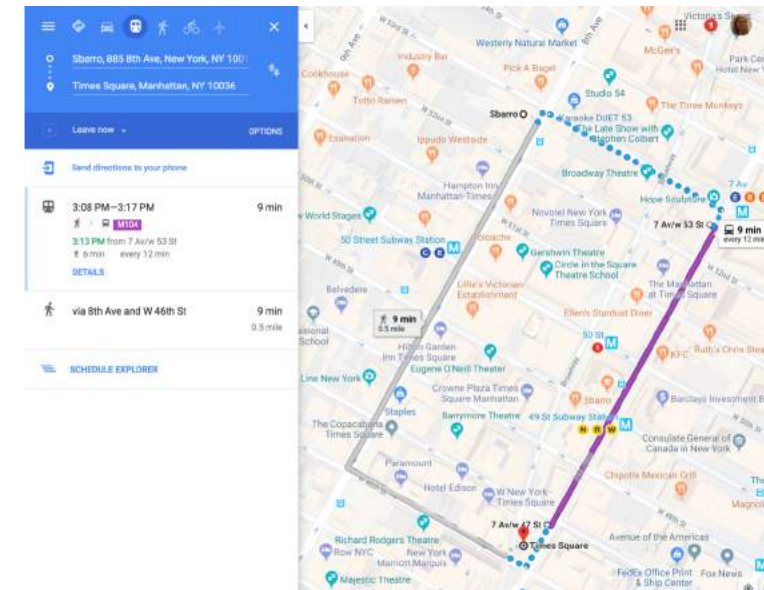
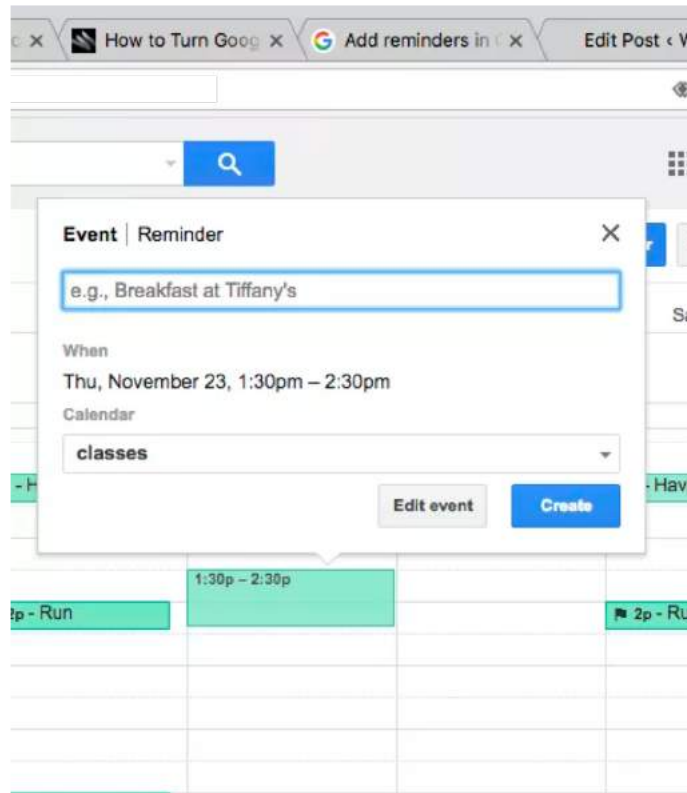
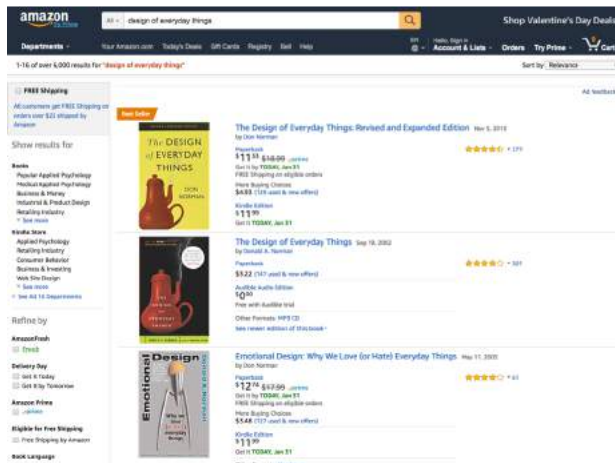
Remember

Users interact with a system to accomplish a goal

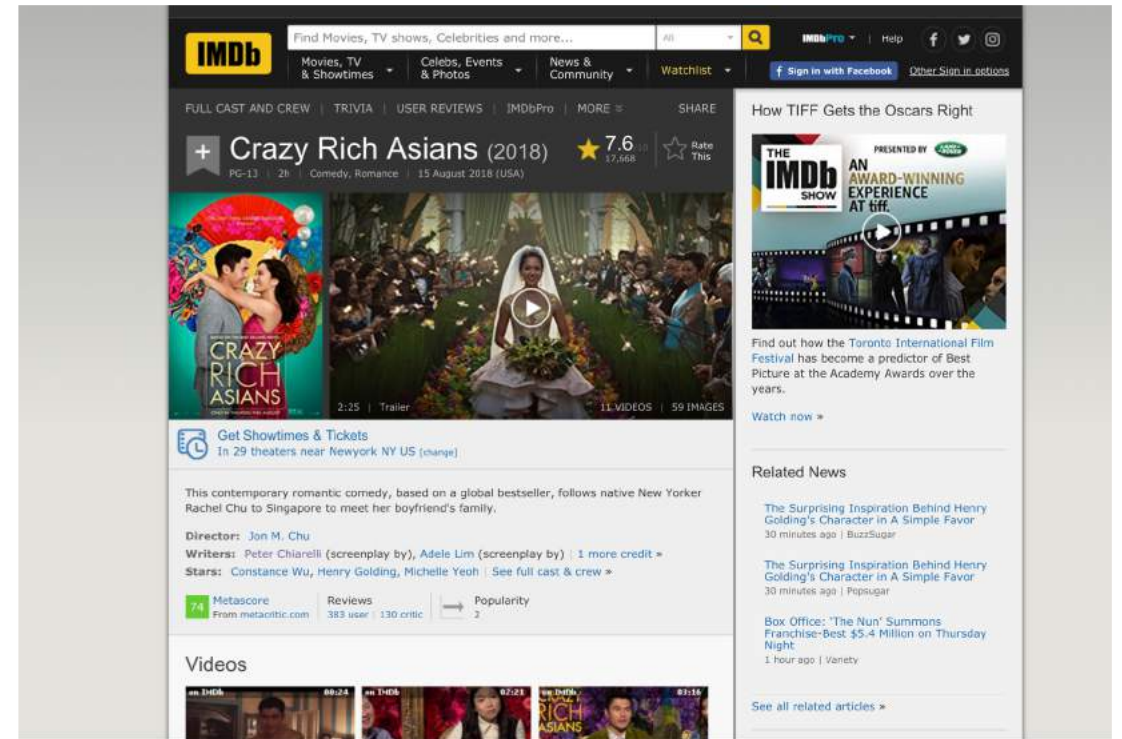
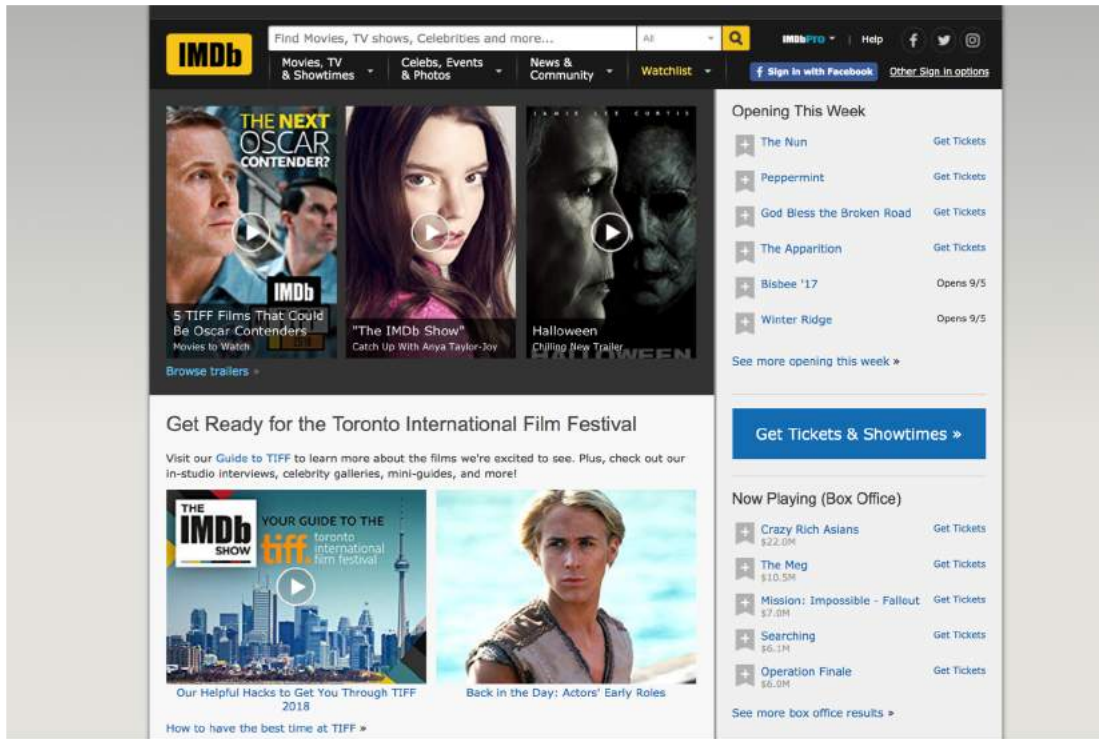
Buy a book

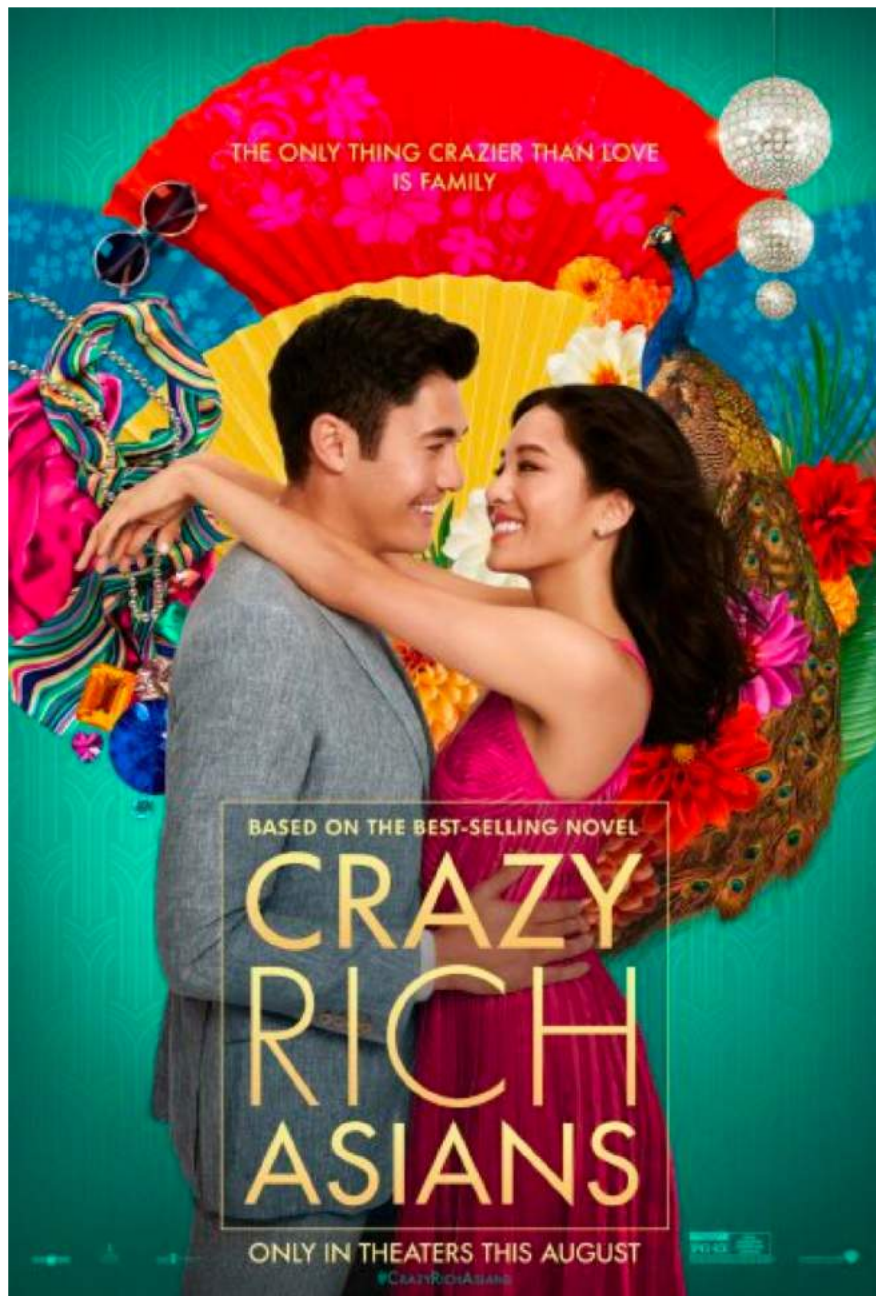
Get to events on time

Get directions

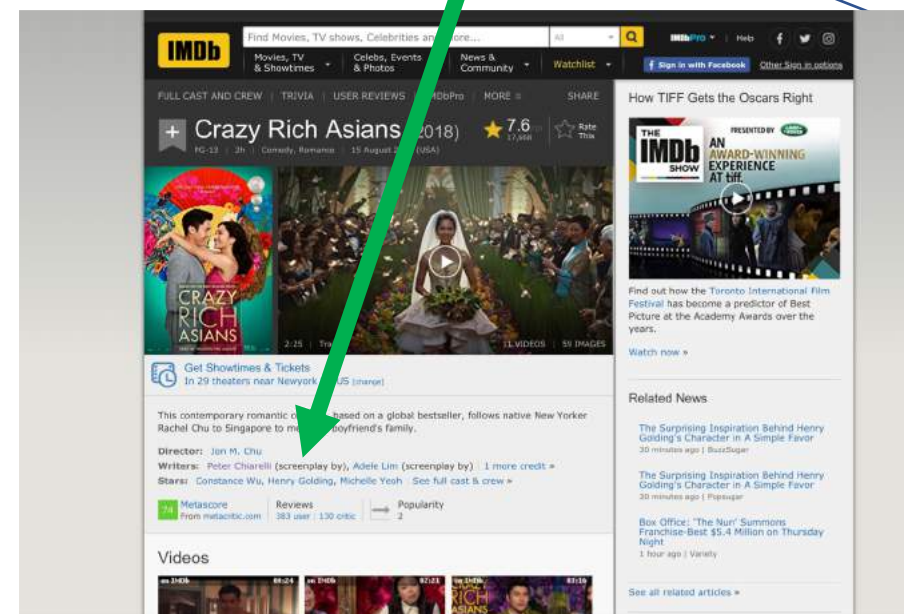


What is the single concrete user goal that best defines IMDB?





Who is that actor?????



Notice:

The way we discover user needs is to observe their actions mechanically

I went to see “Crazy Rich Asians”



I saw an actor I didn't recognize
Who was really good and had an
awesome accent



And I'm like, “Who is he?”



From a concrete instance, it is the designers job
to abstract the general need appropriately.

For next week:

Remake the **basic functionality** of IMDB.com

- Must use Flask (web server) back end
- HTML, JavaScript, jQuery, Bootstrap
- Must have multiple pages
- Must serve data from the server

- **NO** static HTML data to display data
- **NO** Database
- **NO** images
- **NO** graphic design

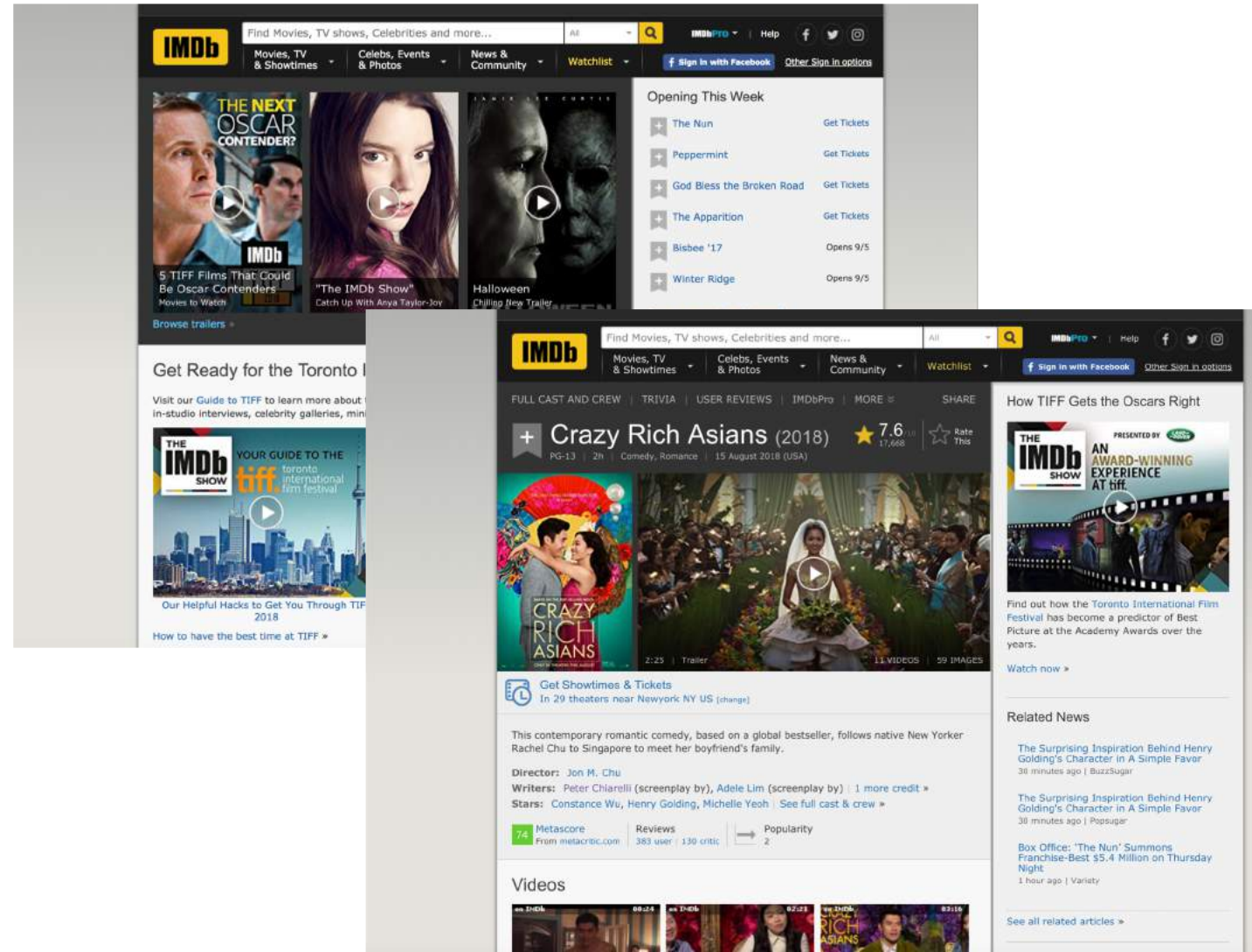
Creating multiple pages in Flask (web server)

```
39
40 from flask import render_template, request, jsonify
41 from app import app, models, db
42 from app.models import Movie
43
44 @app.route("/")
45 def home():
46     m = Movie.query.all()
47     return render_template('home.html', movies=m)
48
49 @app.route("/movie/<id>")
50 def movie(id):
51     movie_data = Movie.query.get(id)
52     return render_template('movie.html', movie_data = movie_data)
53
54 @app.route("/addMovie")
55 def addMovie():
56     return render_template('addMovie.html')
57
58 @app.route("/saveNewMovie", methods=["POST", "GET"])
59 def save():
60     #cur = mysql.connection.cursor()
61     #how do I get the data from post?
62     send_back = {"status": "failed"}
63     if request.method == 'POST':
64         data = request.args #request.args
65         data = request.get_json(force=True) #request.args
66
67         newMovie = Movie(title=data["title"], year=data["year"])
68         db.session.add(newMovie)
69         db.session.commit()
70
71         send_back["status"] = "success"
72     return jsonify(send_back)
73
```

To remake the basic functionality of IMDb.com

What goals should we define?

- High-level user goal:
 - ???
- Low-level dev goals:
 - ?
 - ?
 - ?
 - ?
 - ?
 - ?
 - ?



Possible Goals for remaking IMDB.com

- High-level user goal:
 - **Allow a user to look up the main actors in a movie.**
- Low-level dev goals:
 - Install Flask – get a “hello world” page up and running
 - Make two different webpages
 - Page 1 - List all movies
 - Page 2 – See the details of one movie
 - When you click on a movie on Page 1, it takes you to that movie page
 - Make a page to create a new movie
 - Make a page to update a movie
 - Make a button to delete a movie

Turn-in a document describing the following:

1. Establish goals.

One high level goal and 7-10 low-level goals that will help you accomplish the high level goal.

2. Iteration.

Report on 3 of the features in your that caused you to iterate on your goals.

1. My plan was to ____x____.

2. But I ran into problem ____y____.

3. And I solved it by doing ____z____.

z = "I added a new subgoal", "I changed my high level goal", "I removed a subgoal"

3. Report on goal progress.

For each of the goals in part 1. Which items you completed?

Show images to document each item. (either of the UI or code)

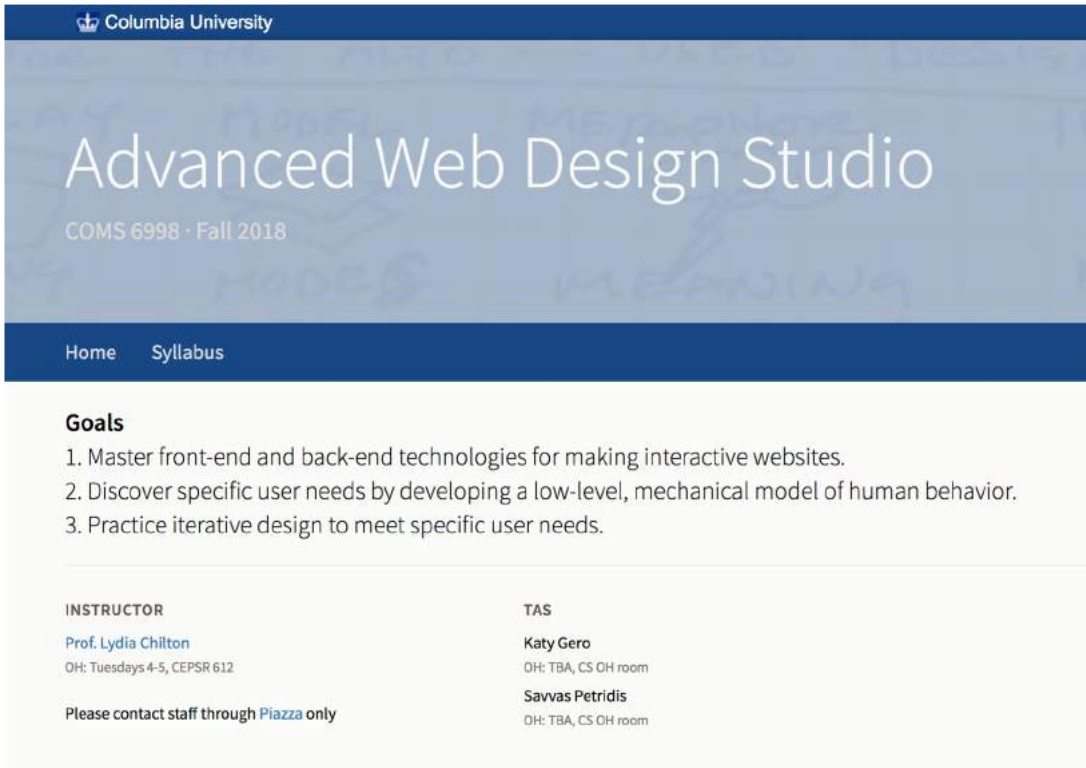
Be prepared to discuss your progress during studio.

You will be graded on whether or not you did each part.

Summary



You already know:
Front-end web dev,
iterative design, critique



You will learn:
Back-end web dev

And practice web design by:

- Rebuilding IMDB.com
- Rebuilding twitter
- Pursuing your own project
- Giving and receiving critique

This is a studio class.
We practice web dev and learn from experience.

Like this:

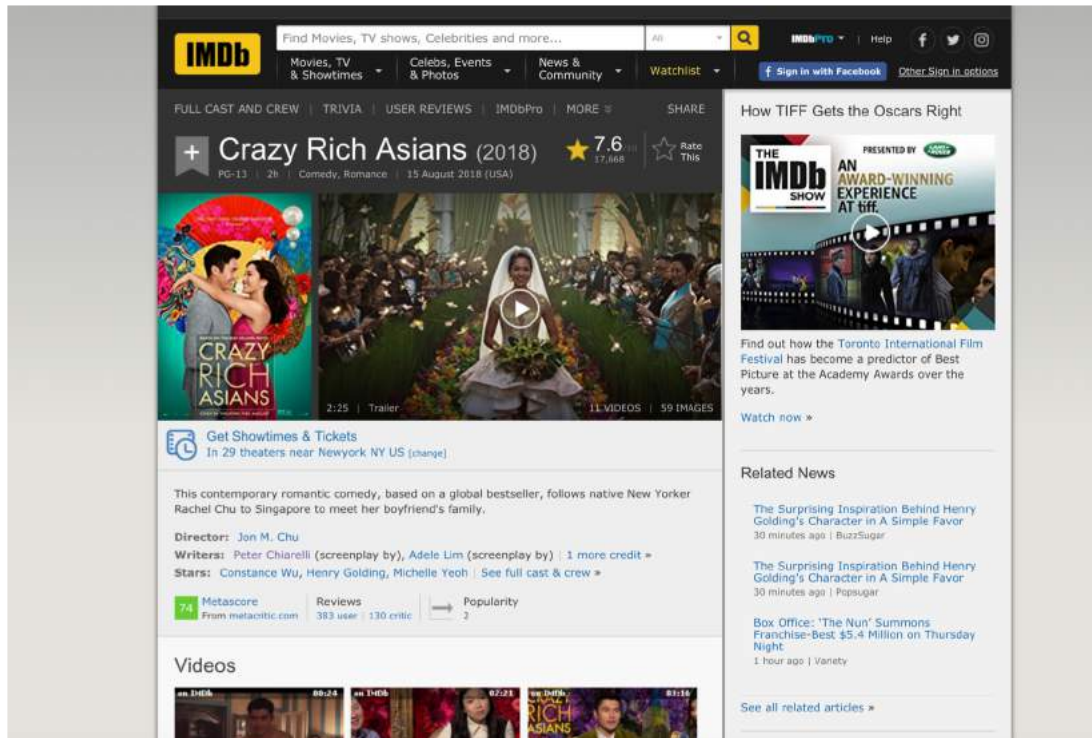


Not this:



Objective 1.

Master front-end and back-end technologies for making interactive websites



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69         db.session.commit()
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72     return jsonify(send_back)
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```


Objective 2.

Discover specific user needs by developing a low-level, mechanical model of human behavior.

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Who was really good and had an
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And I'm like, “Who is he?”

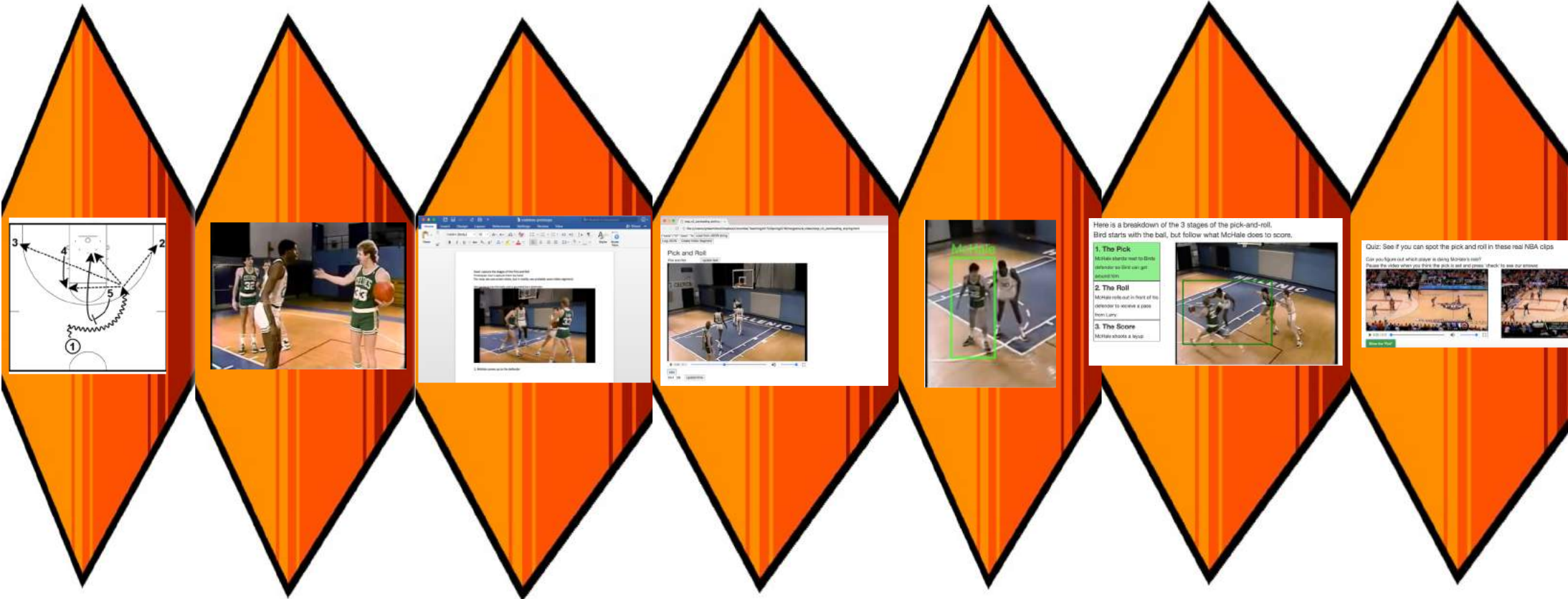


From a concrete instance, it is the designer's job
to abstract the general need appropriately.

Objective 3.

Practice Iterative design.

Idea:
Help NBA fans recognize the the pick-and-roll during games.



Idea

Resources

Design

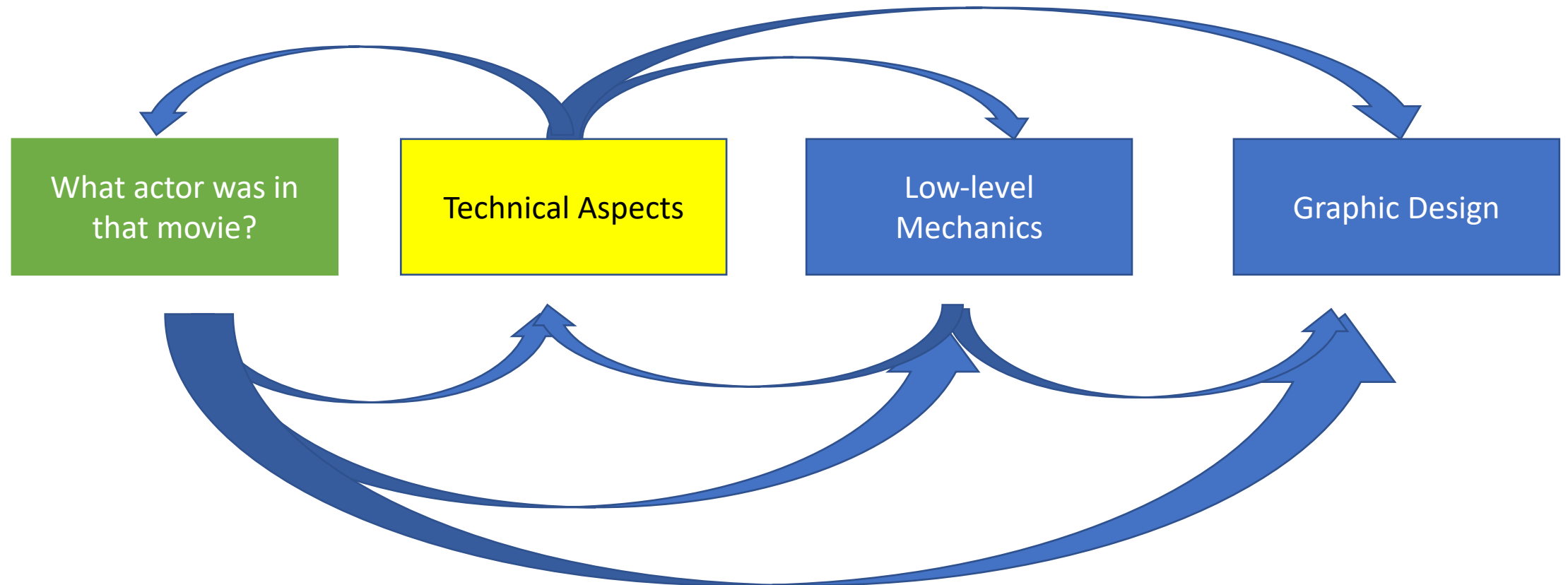
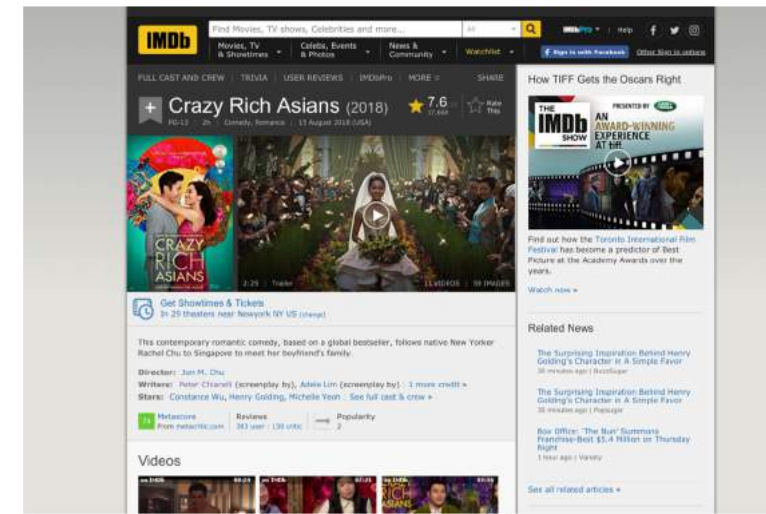
Technical

Design

Idea

Design

Iterative design is equally important when rebuilding apps



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3. Report on goal progress.

For each of the goals in part 1. Which items you completed?

Show images to document each item. (either of the UI or code)

Be prepared to discuss your progress during studio.

You will be graded on whether or not you did each part.

Late work cannot be accepted.
Turn in whatever you have by 2pm to get credit.