### In this lecture, we will discuss...

- ♦ Cache Revalidation Headers
- ♦ Custom Logic
  - If-None-Match
  - If-Modified-Since



### Cache Revalidation Headers

- Validate if what we have is current or stale using conditional cache validation headers:
  - If-Not-Match: (Etag)
  - If-Modified-Since: (Timestamp)



### Cache Revalidation Headers

- ♦ If the resource has not changed
  - enable server-side to do less processing because client does not need a new copy
  - report the resource has not changed to the client
  - enable client-side to do less processing because nothing has changed



# ETag and Last-Modified: Storing

♦ Get a current copy of ETag and Last-Modified and store



### **GET: Same Action**

- ♦ GET request, same payload
- ♦ 200 ID returned



#### With Headers

- ♦ Add If-None-Match header with the ETag or If-Modified-Since with the Last-Modified timestamp
- ♦ 304/NOT\_MODIFIED returned



## **Conditional Logic**

♦ Fire only if the caller is not getting 304/NOT\_MODIFIED

```
def show
# fresh_when(@movie)
    @movie.movie_accesses.create(:action=>"show")
    if stale? @movie
        @movie.movie_accesses.create(:action=>"show-stale")
        #do some additional, expensive work here
    end
end
```

♦ Note: stale? calls fresh\_when under the covers



### **Conditional Logic**

last\_modified value is being set to the most recent
 change in the collection

```
def index
  @movies = Movie.all
  fresh_when last_modified: @movies.max(:updated_at)
end
```



## **Conditional Logic**

- ♦ Provide both If-Modified-Since and If-None-Match in the header
  - If either fires, our conditional logic will get triggered

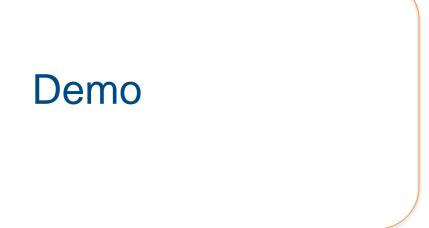


#### **Browser Test**

- ♦ Chrome → Developer Tools → Network (Preserve Logs)
- ♦ http://localhost:3000/movies/12345.json (Status → 200/OK)
- ♦ Hit refresh (Status → 304/Not Modified)
  - If-Modified-Since and If-None-Match headers were supplied
- Click disable-cache at the top of the Network tab and hit refresh
  - The conditional headers are not sent to the Rails server and the full response is returned using a 200/OK



### **Cache Revalidation Headers**





### Summary

Cache Validation Headers add value and improve performance when it comes to caching

#### What's Next?

♦ Cache-Controls

