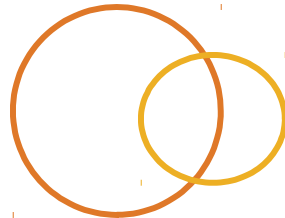
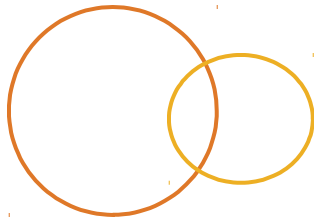
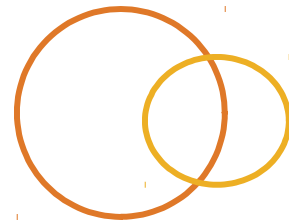
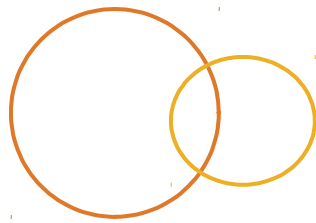


# Controlling the Response



# Objectives



- ◉ Obtain a ResponseBuilder initialized to an OK status
- ◉ Use a ResponseBuilder to configure/reconfigure headers, entity, status code, and content-type
- ◉ Prepare a Response object from a ResponseBuilder
- ◉ Return a Response object from a JAX-RS service method

# What's In A Response?



- ⦿ HTTP requests receive three things in response
  - ⦿ Status code
  - ⦿ Headers
  - ⦿ Entity body
- ⦿ A service method that simply returns a Java object has no control over the status code, nor headers
  - ⦿ JAX-RS will fill in some headers, and return a success code if the request was routed successfully and the method did not throw an exception.

# Controlling HTTP Response



- ◉ `javax.ws.rs.core.Response` object aggregates HTTP status code, headers, and entity
- ◉ `Response` has a static factory that creates a builder
- ◉ `Response.ResponseBuilder` allows manipulation of all three elements, then creation of final `Response` object
  - ◉ Initial creation of builder requires a guess at the expected status code, but this code can be changed later

# Using Response / ResponseBuilder



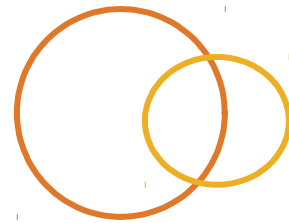
```
public Response doStuff() {  
    ResponseBuilder rb = Response.ok();  
    rb.header("x-header", "a header value");  
    String entity = getEntity();  
    if (entity != null) {  
        rb.entity(entity);  
    } else {  
        rb.entity("Sorry, that didn't work");  
        rb.status(Response.Status.NOT_FOUND);  
    }  
    return rb.build();  
}
```

# Response And Content-Type



- ◉ By default JAX-RS will attempt to set the content type of the response by negotiation with the caller
- ◉ The Response object can override this using the type() method of the ResponseBuilder
  - ◉ Do this with caution, JAX-RS usually makes the right choice
- ◉ JAX-RS also converts to the target type, though we have not looked at this yet
  - ◉ i.e. Java objects ↔ JSON or XML

# Lab Exercise



- ◉ Create a service endpoint on the URI `/response/<id>` where `<id>` is any number
  - ◉ If the value of `<id>` is between 0 and 100, return a text message “Item `<id>` found”, along with a status code of 200, and a header “x-range” set to the value of “ok”
  - ◉ If the value of `<id>` is outside the limits, return status 404 and the html message  
`<html><body><h1>ID Not Found</h1></body></html>`
    - ◉ Be sure to set the content type.