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**COS 731 – Assignment 1**
**Bellisimo Retrospective Report**

1. In adding the new features to the application I created new microservices for the features.
2. A problem I faced when adding the new features to the application is learning about mocking frameworks. I decided on using the Mockito framework and had to go through tutorials on how to use it. In the end it was actually simple. Other than that the other functionality was simple to add. I just had to extend the Users service and add a few new services and modify the front-end application.
3. Extending users service to have more information for their users profiles.
4. I used the microservices architecture. Overtime the architecture evolved because I initially had very fine grained small services but as I went along and built the composite services found that some services would just be redundant and had slightly bigger composite services. So in the end I had small data services, products and users then I have the bigger composite services that handle information from those two services, in phase one that is the catalogue service and in phase two I added the cart service for chopping. In addition there was support services for service discovery and routing that acted as a gateway for services to communicate.
5. My architecture in phase one was very accommodating because all I had to do was add a new service for the shopping features. So without touching my code in phase one I was able to extend the application just by adding a new spring boot application. Through the routing and discovery services this new service was able to interact with the old services.
6. I think the microservices architecture is best for the application. While this is a simple application and the monolithic architecture would have worked just fine, the microservices architecture allows one to make changes and add additional features without disrupting the current application. In a live version of this application I could have just created my new services and run them without stopping the application. In addition even with editing the users service I could have edited it, and ran a new instance of the service and onlyonce the new instance was up and running do I stop the old one thus users of the application wouldn't be disturbed but just suddenly get the new version in which they can view their users profiles.