

I was a physics major in college, so my programming experience is pretty limited, which I only know a little about C.

(a): 1,2,3

(b): 4,5

(c): 6,7,8,9

Question 13:

1. The errors was shown to me for question 8 is "no service", but I feel like there also exists the index error, but it does not show up. The error in question 9 is index error, but the was some random numbers compared to question 7.
2. From my understanding, I think the reason that makes the controller harder to test than cache proxy is that we have to get all the data we need at the beginning , and store it to the hash map. However, for cache proxy we could try to get the thing we need whenever we want.
3. I guess the reason we can't compose them together is because they are using different service, since Randomproxy is getting picture randomly from the service, and Cacheproxy is getting the certain pictures and store it to the cache. Another guess might be Randomproxy and Cacheproxy are using the same getpicture() method.
4. In my opinion, there might be 2 possible ways, first is changing the Randomproxy service to baseservice, so in this way they are sharing the same service. Another way might be creating anthoer getpicture() methond, so the Randomproxy and Cachproxy has different getpicture method.