

## Dian Yang

s1626297

1. previous programming experiences:

I learned C++ five years ago. And after that I have used C and python in some of courses.

2.

(a) The controller: [1][2][3]

(b) The cache proxy: [4][5]

(c) The tests: [6][7][8][9]

3.

(13.1)

The error B that I found in task 8 is that it doesn't show any pictures in the picture viewer and the service part of title shows that "from NoService". After that I wrote the serviceTest() and found the picture.source is always "NoService" instead of "MyCacheProxyTest".

The error C that I found in task 9 is that the return index of pictures is always 0 no matter what index we have requested.

I didnt find error D, so I think it might be no error for D. I've wrote the multiRunTest to run all tests 100 times and error D all passed them. So I have confirmed that there is no error for D.

(13.2) There is no return value/object in MyController, so it's hard to test as the way we tested the CacheProxy.

The way I may modify MyController class is that we may write some methods that can return the picture object. By this way we may test the picture object.

(13.3)

For RandomProxy, it will obtain each picture from a random baseservice. The random baseService is randomly chosen form the base services list. It's hard to compose RandomProxy and CacheProxy because we cannot confirm which random baseservice is chosen each time.

And also for MyController.subjects, we have to confirm all subjects exist in all services.

(13.4)

I change it to following way to connect CacheProxy and RandomProxy.

```
Service = CacheProxy
CacheProxy.base_service = RandomProxy
RandomProxy.base_services = FlickrService,BingService,PaulsService
```