Name: _____

You may use books, notes, Wikipedia, etc., but not another person.
Slide the exam under my office door (MK353) by December 13th at 5pm.

1. What problems does Patchworks aim to solve? (10 points)

2. What are three things you can measure to understand how performant users are with a user interface? (10 points)

3. What is a development process that you can follow such that you are always ready to demo your application? (10 points)

4. Match the pattern on the left to the relevant description on the right. (20 points)

    Builder   Your app has an object that should
                                    persist forever and be created only once.

    Observer   Your app needs to generate XML files
                                    from scratch.

    Memento   Your app needs to save its state so that it
                                    can auto-recover from crashes.

                                    Your app needs to support switching
                                    among several different instant
    Adapter   messaging libraries, but each one has a
                                    different interface.

    Singleton   Your app needs an event handling
                                    system.

Name: _____

5. What technique did we discuss for automatically generating code to fix bugs? (5 points)

6. Briefly explain what an affordance is. (5 points)

7. Give me three examples of affordances in VS Code. (15 points)

8. When do problems arise with affordances? (10 points)

9. Sam is creating an application that will post photos to different social media applications. She currently has a class UploadImage that will need to use the APIs from Flickr, MySpace, Friendster, and Orkut. Sam wants to design it such that she can later support additional social media applications. What design pattern that we discussed in class should she apply? What additional classes would she need to implement (list them all)? You can assume each API already comes with its own class that provides functionality for uploading an image. (15 points)