Project Name

Student Name and Number (one per line)

Date (Hard deadline for M4 and final report April 15th at 5:30pm, no extensions, -1 mark per day)

# Identify a Substantial Pattern (Due individually: 3 points)

Note: Each group member must do this part individually. However, you should hand-in each project members pattern in a single document.

Note: for it to be substantial, you might report on a couple patterns. E.g., how factory and adapter work together in the system.

In a maximum of one page -> Pattern must be a recognized pattern. Include a reference to a book or reputable website that describes the pattern. Provide a brief diagram showing the interacting classes (the actual classes from your system). Write up why the pattern is need and what its role is in the system. Describe any reverse engineering tools used. Sequence diagrams may be helpful.

In maximum of one page, for your design pattern: Copy-and-paste the class, method, and attributes **declarations** (and anything else that is necessary) directly from the source code. Do not include code that is unnecessary (be selective, you will lose marks for large dumps of source code.)

# Implement a refactoring (7 marks)

Think small! But a rename is not going to be sufficient. You will hand in a patchset. Each patch is a diff of the system showing how the system has changed. The change log will describe why the change was made and its impact on the system. The patches in the patchset should follow a logical order. Each patch must be small, independent, and complete. Err on the side of making **many** small, independent complete changes. Ideally, you would also provide a test to show that the behaviour has not changed. Each patch should be in an individual file with the name Patchset#-#.patch (ASCII text only). Group them in a zip file. Use git diff to make the patch files.

Patchset 0/2: Refactor class VideoAudio into two classes

1-3 Paragraphs describing how each of the changes (patches in the set) tie together (no diff)

Patchset 1/2: Create new class Audio

1-3 Paragraphs describing why

Diff showing lines changed

Patchset 2/2: Move method audioRecord into Audio class

1-3 Paragraphs describing why

Diff showing lines changed