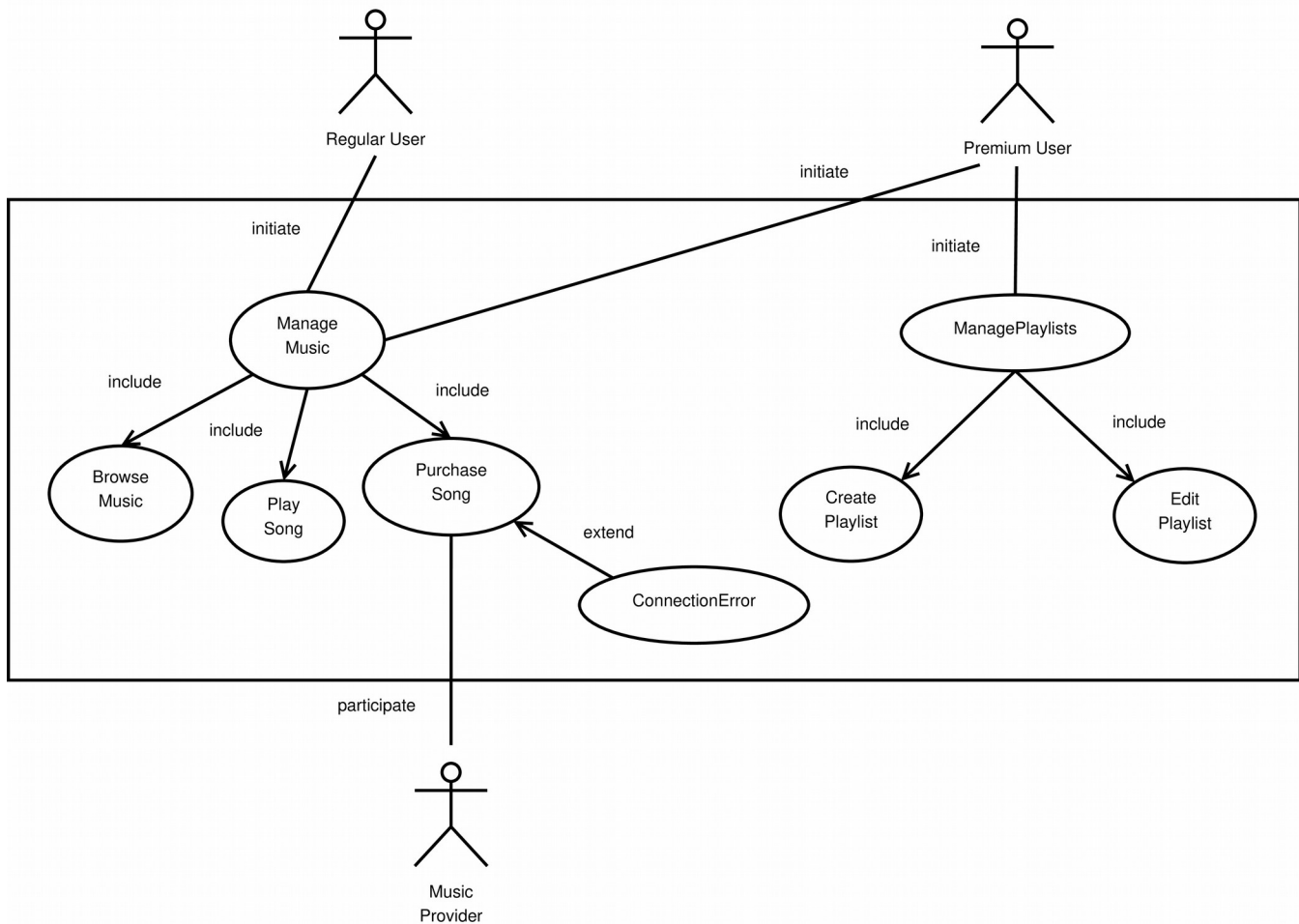# COMP 3004
Midterm Exam Solution -- Version 1

[out of 50 marks]

1. [1 mark] b
2. [1 mark] a
3. [1 mark] a
4. [1 mark] c

5. [3 marks]

   Grading:
   - 2 marks for correct example
     - must be based on inheritance and aggregation, not uses relationships
     - relationships must be between the classes of different subsystems, not just between subsystems
     - 0 marks for no classes, or for only 1 subsystem
     - 1 mark for only two correct subsystems
   - 1 mark for explanation of coupling and how it relates to the diagram

6. [3 marks]

   Grading:
   - 2 marks for correct example
     - must be based on inheritance and aggregation, not uses relationships
     - relationships must be between the classes in the subsystems
   - 1 mark for explanation of cohesion and how it relates to the diagram

7. [40 marks]
   a. [6 marks]

      Grading:
   - 1 mark each requirement that makes sense
   - 0 for non-functional requirements with no category, or with the wrong category

   b. [4 marks]

      Grading: 1 mark each correct entity object
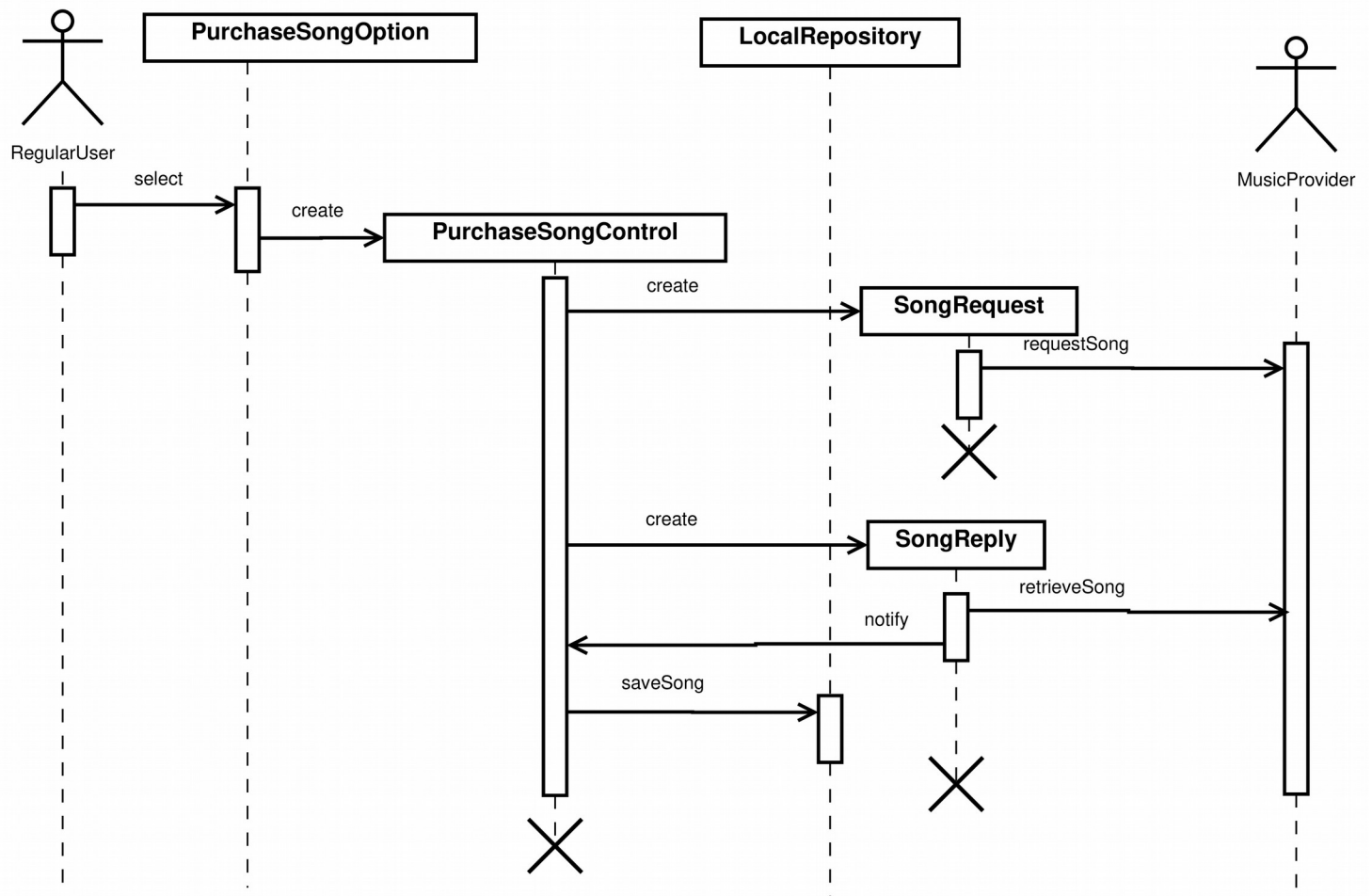
c. [15 marks]

Grading:

- 1 mark: regular user actor with correct relationship
- 2 marks: premium user actor with correct relationships
- 2 marks: music provider actor with correct relationship
- 1 mark: system boundary
- 2 marks: 1 each high-level use case
- 5 marks: 1 each detailed use case with correct relationship to high-level one
- 2 marks: extend use case with correct relationship

Deductions: -2 marks for each additional actor

d. [15 marks]

Grading:

- 7 marks: 1 mark each actor and object
- 8 marks: 1 mark each operation