Assignment 1: Availability Design

As a software architect, you are asked to design an online bookstore. The online bookstore has a high requirement for availability in that it will always open to accept customers' book orders. The planned capacity of the store is to serve 1,000 – 10,000 customers per hour, 24 hours a day, 7 days a week. Any short period of system down time will result in losing quite significant amount of revenue. Thus, the availability is an important quality requirement in constructing the system. The system design must keep the potential system down time to a minimum. **Your first step is to ensure the availability of the DB service in your system.**

However, like all other projects, the online bookstore has only a limited budget. You as the architect finally decide to employ PASSIVE REDUNDANCY tactic to ensure the DB service availability in your design. By combining other availability tactics such as fault detection, state resynchronization, rollback, escalating restart etc., you expect to build a highly available *architectural pattern* for the DB system to meet the project's requirements.

Your design report should include following aspects:
(1) A diagram describing how you apply the above–mentioned availability tactics to compose a highly available architectural pattern for the DB system. You can use the lecture slide (the animation for *active redundancy*) as your reference.
(2) Briefly explain how each tactic in your design works.

Notes:
(1) Send the assignment as an attachment to: liqiping1991@gmail.com, with the following email subject: "[SA assignment 1]" + Your student number (e.g. [SA assignment 1] 3120102776);
(2) The document must be delivered in Word or PDF format and named as follows: your student number + "_" + your name + "_" + "assignment 1" (e.g. 3120102776_张三_assignment 1.doc).
(3) This assignment will fall due on Apr. 20, 2015.