Jack Davey

**Testing and Tailoring Cloud Storages Risk Assessment**

This document sets out the main risks to my MSC project and also details how they will be mitigated. There are two main areas of risk associated with this project. Firstly, there are risks associated with personal difficulties, and secondly there are risks associated with the technical aspects of the project.

**Falling Behind and personal difficulties**

The first major anticipated risk is deadlines in the original project plan. Due to changes that may occur and ad hoc work during each project iteration. These may be very ambitious in these targets that I have set myself, and it is difficult to gauge at the present time how long each piece of work is going to take.

An agile development methodology will be used to mitigate unforeseen risks to the project iteration. This will allow me to monitor the progress I have made each week, ensuring the project is still on target. The project plan and performance data will then be updated based on the latest performance information.

Included in the risk assessment are ad hoc personal days, such illness and holidays. If this risk occurs, then it will have an impact on the delivery of the project. The planning strategies discussed above will be used to mitigate this risk.

**Technical Difficulties**

The second set of risks that I have planned for are the technical issues.

Firstly, using several new technologies as part of my project, such as the Scala programming language, the Play framework for developing web services and the Akka concurrency framework. These have been chosen as they are particularly well suited to this project. Because the technologies are new, there is a chance that problems with them, such as the time needed to learn to use them effectively, could hold up the progress of the project.

In order to mitigate this risk, I learnt both Scala and Akka during the Project Research module, so that I was relatively competent in these technologies before the project started. This has given me the ability hit the ground running, causing less delay to to the project. Several reference books have been acquired for additional information.

A further set of risks are the theoretical issues associated with the project itself. This is because the emulator that I am trying to build relies on incredibly complex technologies and underestimating the complexities of these could severely slow down progress of the project.

It is hoped to mitigate this by following good software design principles that will allow me to get a clear picture of the eventual design and behavior of the system before implementation. Working through the major algorithms with my supervisor to ensure any serious mistakes are avoided.

Towards the end of my project, I will to run the sample programs created on real cloud systems in order to see if the results are comparable. The challenge here is that my minimal experience with cloud platforms, doing some work on Google App Engine as part of the cloud computing module studied this year. Therefore, in order to mitigate this risk, I will start work on this part of the project at the same time as implementation work on Basic Availability begins.