**Risk Assessments**

Identify, Assess, Plan, Monitor

**Mitigating Risks:**

Accept – Do nothing, assuming the cost of doing something is more than that of the risk itself

Avoid – Fix it, assuming it is something we can fix

Mitigate – Lower the impact, lower the chance that it happens and the level of risk if it were to occur

Transfer – Give the risk to someone else, usually via insurance or penetration testing

**Risk Matrix:**

**Risk 1 – GitHub Outages**

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| **Description** | **Evaluation** | **Likelihood** | **Impact Level** |
| GitHub outage / connection issues | Connection to GitHub is slow or not present | Low  Outages are not common with GitHub | Very high  This, depending on the timing, may delay our ability to create new branch features, push to dev, push to main, pull down the repository so we can work on it, etc |

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| **Responsibility** | **Response** | **Control Measures** |
| Developers working on the project at the time (me) | Report it to higher ups and anyone working on the project (just the trainers)  We can only really wait for it to work if it has prevented us from pulling down the work we need. Otherwise, we can continue as usual and save our work manually, without using Git | Be familiar with methods of exporting or saving the repository to the local machine without using Git.  Pull down work for the next day as soon as you’ve pushed it up and save it locally.  If we are having any issues with GitHub connections, we can check the downdetector website as well as the official GitHub outages Twitter account for any reported issues. If there are no issues reported, it must be an issue on our end which could require an internet restart or a restart of the virtual machine. |

**Risk 2 – Data loss**

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| **Description** | **Evaluation** | **Likelihood** | **Impact Level** |
| Data lost, whether deleted, misplaced, stolen or corrupted | Data could be lost if the virtual machine shuts down without my notice. I may miss the notification alerting me to the time left on the VM or it mightn’t have been presented at all. I may have not pushed my work to GitHub and could lose my work progress.  I could misplace and lose my work files or they could be stolen or corrupted if someone has unauthorised access to my GitHub repository or virtual machine. | Low | High  Depends on the difference between the last restorable point and the point in which the work was lost |

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| **Responsibility** | **Response** | **Control Measures** |
| Me | Attempt to restore lost data using forensic methods if it is *that* serious of an issue. This only really works in the case of the losing or deleting work on the virtual machine’s file system and can only be done before the VM shuts down again, as it will be restored to its previous state.  View access history of GitHub repository and the actions last taken which resulted in loss of work. Can attempt to restore work to the last branch saved, but this won’t resolve the data lost between those two points. | I set timers for myself to ensure that I don’t miss when the virtual machine is due to shut down. This ensures I save my work regularly, too.  Set repository to private and only allow access to those reviewing my work.  Create backups of work frequently, in multiple places. |

**Risk 3 – Poor management**

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| **Description** | **Evaluation** | **Likelihood** | **Impact Level** |
| Poor management | Tasks may flood developers all at once, deadlines may fly by unmet and various tasks might be worked on without any consideration for prioritisation | Very low | High |

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| **Responsibility** | **Response** | **Control Measures** |
| Myself | Set out a plan based on current progress and deadlines to get back on track immediately. Be prepared to spend extra time working to catch up on any work left on the backburner | Use Jira to organise all tasks and allow for easier, more controlled management of the project. This allows for tasks to be scheduled at certain times, preventing developers from being overwhelmed with however many tasks are left to do and allow deadlines to be met. |

**Risk 4 – Low productivity**

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| **Description** | **Evaluation** | **Likelihood** | **Impact Level** |
| Low productivity | Productivity is low, whether due to motivation, personal reasons or limited resources (slow internet, slow virtual machine, etc) | High  Personal reasons may contribute to a lack of productivity or motivation, which can reduce overall work completed. | High  Can depend on the severity of the situation |

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| **Responsibility** | **Response** | **Control Measures** |
| Myself | Work overtime or prepare to work at different times when the mind is clear. If the internet is slow, could use a laptop and move elsewhere in hopes of getting faster internet, whether in a café, library or just another room in the house. If the virtual machine is slow, try closing other applications open in the background or ask the trainers for advice on how to speed it up if you can’t figure out how to fix it yourself. | Stick to a daily schedule and use Jira to help navigate through tasks and workload. Prepare to work at other times if things are difficult at usual times and continue working as normal. |