# Project Proposal

# Motivation & Rational

The motivation for this project is to turn quite an old & dated system into something more modern & centralise the whole dissertation process. Picking a dissertation topic is something every student will have experienced, some even changing topics later down the line & the overwhelming response from the feedback I have received has been that the current system isn’t that intuitive or great. Using pen & paper to pick a topic is not very in line with the modern era & comes with the problem of relying on one set date to either attend the dissertation fair or email the member of staff responsible for allocating them. This is an unnecessary amount of work to set up entire dissertation fairs for every subject & handle a bunch of forms for each student picking their topic. Not only that, but you must dedicate a member of staff’s time to read & then enter each one into an electronic system. Furthermore, there are risks with using this approach as the forms could get lost or get damaged in some way. In the case of emailing that isn’t too great either because as a student, you must spend time looking up the correct person to email & still you have the problem of dedicating staff time to enter this manually from all these emails. In the case of entering your topic through NESS, while an improvement the system was not designed for this purpose & only fulfils the first part of what I aim for with this project.

The second part of which will be about improving the method of receiving feedback from your supervisor. The current problem with that being on the student side, it can be difficult to manage all your feedback & these could be ranging from an email to a document uploaded to Slack. On the supervisor’s side you have this problem of having to manage multiple different potential lines of communication, depending on the supervisor, they could be using a wide range of software to communicate with their students, from Dropbox, email, Slack & more. Even assuming the supervisor strictly offers feedback to students via email, they must keep on top of them constantly to ensure they don’t get buried under other work-related emails & it can be difficult to remember & manage all these requests for feedback.

As such the benefit will be of both students & staff to find a better system that’s easier to use & more time efficient. In terms of the wider scheme I have no doubt that other universities use similar dated systems of handling their dissertations & think such a system could benefit every student.

# Aim & Objectives

## Aim

1. Create a centralised web portal for the school of computing for allocating dissertation topics & providing a hub for uploading work to be more easily reviewed by supervisors.

## Objectives

1. Research current systems supervisors & students use (Dropbox, Slack, Email, etc).
2. Conduct questionnaires to find out whether students & supervisors desire a different system to the one currently in place.
3. Design & implement the web portal.
4. Evaluate the final product, find out whether students & supervisors prefer this centralised system over the current one.

# Background

|  |  |  |
| --- | --- | --- |
| Source | Summary | Brief Explanation |
| Newcastle University | Base of my project | The source of my entire project & whose system I aim to improve on. My questionnaire data & evaluated feedback will entirely be from students & supervisors of Newcastle University. Amongst this a lot of research are systems currently employed by Newcastle University, such as NESS & ePortfolio. |
| Practical Guide to Cloud Computing | A PDF guide on cloud computing | A guide to help consider how I might want to implement my website. One of the key issues raised from supervisors was performance & reliability during peak times, as such using a cloud based solution could alleviate this issue. This source provides a great deal of information on each implementation & how each fair in areas like security & elasticity. |
| Ultimate Cloud Hosting Guide | Article on cloud hosting | Article to help me gain some basic understanding & help me choose which type of cloud hosting I want to implement. Also provides me with some of the downsides to cloud hosting & some of the potential security risks such as keeping data safe. |
| 8 guidelines for exceptional web design, usability & user experience | Article on web design | Article detailing some guidelines on how to make a great website. This will help me to create an intuitive & easy to use system which naturally will be important as the hope will be my final product could be used by all students & supervisors, not just those familiar with computing science & hence the system should be easy to use & accessible. |
| 247 web usability guidelines | Checklist on 247 different guidelines | A good resource to help improve usability of the system & check for guidelines my system might benefit from by allowing me to go through the list & tick off which features my system provides while testing & which I might want to go back & implement. |
| 18 tips for website performance optimization | Article on improving performance of websites | A useful guide to help me improve the performance of my system as much as possible & reduce unneeded strain. Provides a great deal of links to other tools too so I can use these to test the website during each testing stage. |

# Diagrammatic Work Plan



Double click the icon above for a greater detail look at the project plan.

# Explanation Work Plan

As can be seen the project plan has been split between both semesters, with semester 2 implementing our Agile development & using sprints to split up the project. Starting with Semester 1 we can see we are on track to complete all our objectives with the only tasks left to complete being this project proposal & the designs for the system. As for the conduct questionnaires task this is primarily a self-imposed deadline, which at the end, I will close the online questionnaires to further responses. The reasoning for such a long period is that I feel it would benefit to gather as much data as possible & naturally given peoples busy schedule, especially for supervisors it allows everyone time to respond whenever they have free time in their schedule. So overall, we can see Semester 1 is mostly structured quite linearly & focuses on mostly documentation for the project with a tiny bit of development at the end with the designs. The reason why the design work is grouped here is primarily due to the free time we will have during December & this will give us a good platform to begin development immediately when we enter Semester 2. I do expect to finish these designs quite early too, as we most likely won’t need the entire 3 weeks & so I hope that I should be able to start doing some groundwork development early. Linking this with our objectives, we see that semester 1 will cover objective 1 & 2 & by the end of semester 1 we should be starting objective 3 with the start of design work on the system. Having completed most our tasks for semester 1 we shouldn’t run have to worry about too many risks, especially since as detailed before I have given myself plenty of time to complete the final task of this semester & hopefully even get ahead.

As for semester 2 we can see this will be where we begin development & testing our system, as well as evaluating the final system & starting to write the dissertation. Using the designs from semester 1 we will start implementing phase 1 of the system which will be the part responsible for allocating dissertation topics & then test phase 1 to make sure everything works as expected. We will then move on to phase 2 once phase 1 has been completed & this phase will be all about implementing the system responsible for allowing students to upload work to their supervisor for feedback. This part of the project will have a significant number of risks given the scope of the project & there is the potential of falling behind schedule, to try to prevent this I will try using the extra time at the end of semester 1 to start early & get a head start. In the case this doesn’t suffice or upon testing, we see the system needs more work we do still have plenty of time until the system demonstration & there is no reason why we couldn’t concurrently work on both the dissertation & project, especially given I have dedicated quite a lot of time to solely focus on writing my dissertation in the future. Upon testing everything this will mark the completion of objective 3 of our project & we will finally move on to our last objective of evaluating whether students & supervisors prefer this system over the current & complete our project with the completion of that last objective.

# References

(n.d.). Retrieved from Newcastle University: http://www.ncl.ac.uk/

*8 Guidelines for Exceptional Web Design, Usability, and User Experience*. (2017, April 28th). Retrieved from https://blog.hubspot.com/: https://blog.hubspot.com/blog/tabid/6307/bid/30557/6-guidelines-for-exceptional-website-design-and-usability.aspx

*A Practical Guide to Load Testing*. (n.d.). Retrieved from webperformance: https://www.webperformance.com/library/load\_testing\_guide/

Chawla, A. (n.d.). *Ultimate Cloud Hosting Guide*. Retrieved from http://dhost.com: http://dhost.com/ultimate-cloud-hosting-guide

Friedman, V. (2008, january 31st). *10 Principles Of Good Website Design*. Retrieved from Smashing Magazine: https://www.smashingmagazine.com/2008/01/10-principles-of-effective-web-design/

JACKSON, B. (2017, JUNE 6th). *18 Tips for Website Performance Optimization*. Retrieved from Keycdn: https://www.keycdn.com/blog/website-performance-optimization/

*Page speed* . (n.d.). Retrieved from Varvy: https://varvy.com/pagespeed/

*Practical Guide to Cloud Computing.* (2014, April). Retrieved from http://www.cloud-council.org: http://www.cloud-council.org/deliverables/CSCC-Practical-Guide-to-Cloud-Computing.pdf

Travis, D. D. (2014, October 22nd). *Web usability guidelines*. Retrieved from www.userfocus.co.uk: https://www.userfocus.co.uk/resources/guidelines.html

*What is cloud computing?* (n.d.). Retrieved from Microsoft Azure: https://azure.microsoft.com/en-gb/overview/what-is-cloud-computing/