CSCI577b – Spring 2020

Post-class 2: Disaster Preventive Controls and Recovery Plan (20 points)

Instructions:

For your CS577 project, develop IT preventive controls and disaster recovery plans. For each component, 1) identify current tools or processes, 2) identify proactive disaster preventive controls to prepare for potential disaster, and 3) if a disaster or an unexpected event occurred resulting in unavailability of the component, identify recovery plans.

Component	Current Tools and Process	Proactive Disaster Preventive Controls	Disaster Recovery Plan
Team members	**Jacques Joubert**: *Co-Project Manager* - is responsible for keeping pace of project, organizing communication, and pushing the project forward to completion stakeholder standards. I**saac Delgado (Me)**: *Co-Project Manager & Operational Concept Engineer* - am responsible for keeping pace of the progress of the project as well, maintain communication between other members of the team, and keep operational concepts of the project in line with clear requirements. **Himabindu Kandukuri**: *Feasibility Analyst & Team Website Manager* - is responsible for analysing risks associated with project completing and identify constraints for project development. Also responsible for managing team website by updating information accordingly. **Saumil Mavani:** *Feasibility Analyst* - responsible for analysing risks and constraints with project completion as well. **Pooja Patel:** *Life Cycle Planner* - Responsible for laying out the timeline of the project as well as illustrating who will be doing what on the project. Responsible for continuously adjusting the timeline to complete the project and predicting the amount of work required.	For the case that either of the project managers are unavailable then the other project manager can obviously take complete charge. Additionally given our progress on the project the roles of OCD are less important especially during a disaster so no need to accommodate for that if that person (me in this case) was unavailable. Regardless all documentation, slack channels, google drive access, is readly available to all team members so anyone could easily take project manager position in the case both project managers are unavailable. In case the team website manager is unavailable I propose everyone have access to website credentials stored on our slack channel for team members to reference for the case we need to update the site. If Life Cycle Planner is unavailable I propose we have multiple platforms where we keep track of tasks where everyone can freely go and see the schedule theirs and others tasks.	Our first objective is to get our peronelle team back together or at least as many team members on the same page as possible. Get in communication with whoever we can with and start validating what/where our data is still available at and how much our deployed project is affected. As soon as we understand what we have and what we don't have we should identify new roles on what is more important according to our data and current status of Winbook. If there are server issues then more roles with emphasis on server end development should be focused on as contacting appropriate stakeholders to get our project live. If our project is completely unusable, then deploying a whole new website off of a cloud platform like GCP, AWS, or Azure would be a great solution for us if the site needs to be up immediately for 577a usage.

	Hao Jin & Priya Patel: S*oftware Architects* - Responsible for designing software components, Designing component interactions with other components and end users. Responsible for illustrating the entire system with diagrams for developers and stakeholders. **Kevin Grimes**: *IIV&V & Quality Focal Point* - Responsible for keeping track of quality of work done on the project as well as the quality of activities between team members like communication channels, meetings, and collaboration.	If either Feasibility Analyst are unavailable I propose we backup Risk&Defect reports and Technical Debt reports so that anyone can easily access in order to pick up where they left off. This goes for the software architects as well, we should back up the SSAD documentation and also gear to a more diagram based documentation to be easily understood by non-software architects. If IIV&V and Quality Focal Point person is unavailable then I propose to have a reporting system in place where individual roles will report on their on quality of work for the time being.	
Team communication	We use Slack, Email, Google Hangout Video Chat, WhatsApp, and Trello Board for communication	We should have everyone's phone numbers along with the contact info we already have like emails. This will increase our chance of getting in contact with team members. We could also add each other on social media platforms like linkedIn or Facebook to increase contactability.	If these components are unavailable then I proposed we contact the school staff for contacting our team members by posting information on piazza or finding emergency contacts
Code repository	We use GitHub	I propose we backup our code repository to other repository services like bitbucket. We can also save an instance of our code monthly to a CSSEmini if its not taking too much space.	If Github is unavailable then we can simply pull from bitbucket if we did this during our proavtive prevention plan, but If we did not then I propose we download any code we have on the server and then push that to a new repository.
Document repository	Google Drive and Team Website for all of our documentation storage	I would propose to make additional backups on other cloud services like dropbox for the case something happens to google drive. We should also backup the team website source code to github	A proposed recovery plan for the case that google drive is unavailable would be to first get in contact with everyone we can and see what data everyone has on

		in case something happens to that as well. Since we have such a small team I would propose that the project managers save a personal backup. For me I could make a backup on my icloud.	accessible to them. If the proposed prevention plan was executed then there should be other platforms with our most recent data.
Database	Our database is hosted on the CSSE server	As a prevention plan I would suggest we contact USC staff to talk about what options they available for us to back up our database data. Since the CSSEmini server is not our server we should identify additional servers available for us to push backups too. We should also have a list of contacts of the faculty we work with on setting up these backups so know immediately who to contact if we need access to our backups.	Our recovery plan would entail getting in contact with the appropriate USC faculty. If we follow the preventive controls then we would have a list of contacts to go through in order to get our backups up and running in our database.
Software / COTS	Current COTS: Jenkins, Docker, Web Sockets, Node Mailer, Protractor, Mocha	For preventive controls I would propose to continuously update the readme and user manual files for these components. These COTS are available for download on the web and so no need to backup for libraries but setting up the COTS will require a learning curve for these softwares and some tech experience. So setting up a nice readme file and user manual that is geared for someone who has no knowledge about the COTS and low tech experience will be very crucial here. It would be beneficial to also have a list of replacement COTS for the case any of these are completely unavailable thorugh their respective companies.	The recovery plan for the case that our COTS and libraries are inaccessible would be to re-download and install all the libraries. If for some reason the COTS are not downloadable through their websites, then we will go through our pre-constructed list of replacement COTS and see what works best for the status of the project given a disaster.
Testing	Protractor and Mocha	For preventive controls, we should back up all test scripts as always. We should do something similar to the COTS preventive controls by constructing a list of potential replacements for the case the Protractor or Mocha are no longer available by their companies. There are	The recovery plan I propose for when protractor and mocha are unavailable is to go through our pre-constructed list and install and try each testing software until we find one that fits our needs and

		some testing software like ‘Jasmine’ and ‘TestIM’.	one that is easy to transfer our protractor code.
Development environment	Our development environment mainly includes Angular frontend, Node.js backend, with a MySQL database.	Making sure we have adequate backups for each of these 3 main components of the supporting infrastructure will be crucial to prevent major loss here. We should make sure to have backups in multiple platforms and talk with USC faculty about their backup locations. Additionally we should also have docker installed (which we do) which can allow anyone to run the development environment not matter what computer they are using. This will help in the recovery process by making sure anyone anywhere can get access on their local machine without having to install all and setup the entire development environment.	The recovery plan for the case that we cannot get our development environment up and running would be to make sure that docker is running. If docker is not running and we have completely loss connection to the entirety of the development environment then we reach out to the USC faculty. We should reference our list of USC contacts for our project on the particular server to see the status and what we can expect. If we need to start from scratch then utilize our backups and try to restore the development environment at that point.
Production or operation environment	CSSEmini server is where winbook angular app is hosted and accessible through users’ web browsers.	My proposed preventive controls for our operation environment would be to make sure our project is accessible to all major browsers and the most popular mobile devices. If for some reason winbook cannot be accessed by school computers, then students could use there phones to access it if they need to.	As for the recovery plan if our operation environment is inaccessible, we could reach out to all the project leads and send out a CSV of their winonditions through email so they can get access to their Win Conditions until the operation environment is resolved.