Assignment: Database Project Plan

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LIS4934: Information Science Senior Capstone

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September 25th, 2023

Future Career Aspirations and Goals Essay

Public institutions such as colleges and universities across the country are required to keep track of the software used within the institution. Not only must such organizations keep track of the actual software, but the software's developer, which versions of software are being used, who has access to which technologies, and so on. Manually keeping track of that much information is entirely inefficient considering the relative ease of creating a database that stores and organizes everything. This paper intends to create a development plan for a college's software tracking database using the six project management steps described by Baars' "Project Management Handbook" (2006).

To begin with the initiation phase, there are a few abstract points to cover about the project. The goal of this project is to create an organized database regarding the many different software solutions used throughout an entire college. While the scope of the database may seem large, the alternative is to keep track of that data manually, which would be practically impossible to keep organized. This database will take inputs from every area of the college and its output will be intended for those responsible for managing what happens with the software. This project will have been a success if all software solutions being used on the campus are accounted for, as well as who their developer is, what version is being used, when licenses to use that software are to expire, and who has access within the college to use which pieces of software.

Once this step is completed, the project can move into the definition phase. In this phase, the general goals of the project will become assigned accordingly throughout the various parties involved in the project, essentially serving to iron out who is responsible for what, how they are to do what they are assigned, what they need to do it, and when they need to do it by. Since much of this step is dependent on adequate communication, the parties involved in the completion of

the project would be made to meet with each other to discuss what their roles amongst the team and what they believe should be done to accomplish those tasks. For example, the software development team may need records held by the accounting department to update the saved costs of each software. For this reason, weekly meetings will be held between all team members throughout the project to discuss any questions, issues, or concerns that may arise during the next steps.

After all members are accounted for and are aware of their roles in the project, the next step will be to begin designing the database itself. This step will be heavily dependent on database architects who are experienced in developing the most practical, efficient, and scalable databases. Since this piece of the project is so important, and taking in factors such as cost and time, it may be worth considering outsourcing this step to an organization dedicated to database architecture for the highest quality consulting possible. There are many approaches to take when creating databases and even more ways to create a resource draining, inefficient database. Whether outsourced or not, this step of the process will be extremely important for the outcome of the project. A relational database will likely be most suited for this project, meaning all fields, tables, and paths should be defined in as much detail as possible. This step will also include designing a user interface since the ones needing to access this database will likely not be data experts capable of navigating through it.

Once a design is created, the next step is the development phase. This phase involves gathering all the necessary resources such as the third-party database architects, the servers that will host the database, etc. After gathering the resources, a schedule of dates/deadlines will be created to make sure the project is moving along in a timely manner. Unfortunately, there is only so much that can be accounted for before the ball starts rolling, especially for a project related to software development. To account for this, development deadlines will be assigned as periods of

time rather than singular dates. For example, creating a navigable UI may have a deadline of 4-6 weeks. If all previous steps have been completed sufficiently, this phase will likely be the shortest.

Ideally, the design and development phases went as well as hoped, which would make moving through the implementation phase straight forward and streamlined. Unfortunately, there is only so much that can be accounted for before getting into the weeds of the implementation process, meaning this stage will be the most likely candidate for delays and/or other problems to arise. Throughout this stage, it will be vital for the success of the project to make sure all members of the project are communicating with one another and not getting so preoccupied with their specific tasks that they lose sight of the greater project. Overall, this phase will be the largest consumer of resources, energy, and time for the project (pre-deployment). At the end of this phase, the database will be taking on its final form, though that form is always subject to change even long after the initial deployment has passed.

Finally, the project will enter the final follow-up phase. This phase essentially serves to take the database out of isolation and bring it to life. The most important piece of the follow-up phase for this project is making sure it is accessible for the college's resource managers as well as making sure they are sufficiently trained on how to use it. While this phase sees the project's first deployment, there will likely be features that require updates/bug fixes upon launch. This would be accounted for through user-feedback surveys, penetration tests, and speed tests to explore both potential errors and potential areas for further optimization. Unlike the previous phases, this process can essentially go on indefinitely throughout the project's life span.

These phases serve their purpose and, while some may take on bigger roles than others, each phase serves to address a uniquely critical component of managing a project. Still, no amount of planning ahead of time can predict the future challenges a project might experience. It

is important as a project manager to understand that no path will ever be perfect and it is vital to be flexible. Understanding where hiccups may occur throughout the project can help managers better prepare for delays or reallocating resources. Planning for such issues will prevent the project from being rushed, which will almost certainly have an impact on the quality of the result.

References

Baars, W. (2006). Project management handbook (1.1). Data Archiving and Network Services.