Database Project Plan

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BSIS Senior Capstone

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September 25, 2023

For this project, it is important to discuss the requirements of the software tracker database that must be implemented by the institution. In this scenario, we will assume the institution is a university and the departments are the various schools at the university. The university must comply with this software database requirement for legal and ethical reasons, but it will also allow the IT department to understand and manage the systems the departments need to be successful. The university might gain an understanding of what software they should provide to their students and staff for free under an application portal. If there is any malicious software downloaded they need to be aware in order to protect the wider university network. Also if staff or students need troubleshooting help, understanding what's on their network could be beneficial. Included in the database must be the type of software, the developer, versions, and types of licensing agreements for each software, as well as the departments, installation dates, and computers the software is associated with. These categories will become the tables in the database, and will be connected to each other through relationships. The results for this project should be a database with the info collected and a system that connects each computer to a specific department, as well as maintenance and statement of use documents.

The feasibility of this project depends on the scope. If software is being used on personal laptops at the university, the IT department will not be able to get software information from them without a permit, due to privacy. This limits the tracking only to computers and technology owned by the university. The information itself is relatively easy to get by using the command prompt on each computer. The trouble begins by making sure all computers are accounted for, and understanding who their users are

and what departments they belong to. The IT department must connect a computer to a department, so if one is used by multiple department personnel, this might prove difficult. Also, this database must include all software, including smart devices that might not be computers. These devices might require special equipment to access their software information or generally be difficult to find and include on the list of devices to check. Employees and partners to this project include the project management team including university oversight, the IT staff members who will create the database and gather the intelligence for it, the heads of each department and other department staff, and potentially outside technicians to gather the systems for smart devices falling under the Internet of Things. Any computers and technology not owned by the university will be excluded, as well as technology no longer functioning and devices where software tracking is impossible or too difficult to be funded.

During the definition phase, a variety of preconditions, operational requirements, functional requirements, and design limitations must be discussed and documented. The project team will need to email the department heads and staff to receive permission and ask when IT can come and analyze the computers and technology in the department. They will need to create documentation on what needs to be added and maintained in the database as well as inform IT staff individuals on their role and responsibilities on the project as well as their expected time spent on the project and pay. The team must also review the required legal documents about what should be included and how security and confidentiality will be implemented. Functional and operational requirements include detailing the specified information, and making sure the database is correct and regularly updated. Also establishing tables and relationships

with these variables to be able to connect and quickly sort information. There must be personnel devoted to updating the database on a regular, yearly basis by gathering new information, and they should have organizational skills, technical skills, as well as knowledge of SQL for database functioning. Some limitations include not being able to include personal identification with each computer associated with the users of the device or their activity, and also that the database software must be compatible with current IT systems. The project cannot include devices not owned by the university, even though these devices may contribute significantly to the work done in the university.

During the design phase of the database, the team will focus on establishing the tables and relationships between the data needed. They will also document the information needed for each device and how they will go about collecting that information. There might be trial and error associated with creating the tables and keys associated with them. Avoid duplicate and non-uniform data, and establish tables and relationships with logic and be wary of partial dependencies within tables. The development phase is when a schedule is created to collect and input the data. Partners will be contacted, and IT personnel will have documented the barebones database setup, and what information they will need to ask the departments and look up on each computer to fulfill the database requirements. There should be a step by step guide created to make sure each collector is following the guidelines, and collecting the software from computers and devices in a responsible way, keeping in mind confidentiality and avoiding upsetting the systems. The team in charge of input will also be given specific instructions and a time frame to complete their sections in. Smart devices that are often difficult to collect their software are also often used by universities, and the university may need to call in a specialist to take apart their equipment to gain knowledge of the software. These contractors will need to be contacted, funded, and given instruction on what to provide for the university. There should be a schedule created with a critical path analysis to understand the timeline and wiggle room the

project team has. The implementation plan is when everything comes together, the data is collected, and the IT personnel input it into the database using SQL or other means. During this time,there may be unexpected events such as relationships not previously seen and database tables and connections that need to be expanded upon. There should be an appropriate hierarchy to make decisions such as these during the implementation process, and preferably, protocols to refer to from the development phase to counteract surprises. If something goes awry, workers can refer back to the schedule and critical path to determine the acceptable risks and maintain consistent momentum towards the goal.

The followup phase is important as it makes sure that the database results are in line with the original requirements, and also that any updates needed to be made in the future have been documented, and there is a plan to revisit the project to complete maintenance while the product is in use. The project plan laid out in this paper is based off of the implementation plan described by Wouter Baars in the Project Management Handbook. Much of the deliverables necessary for the plan have been described but not thoroughly written in this paper, and require additional study. This is meant to be an overview of the process of what it would take to develop a database tracking software for a university.

References

Baars, Wouter. (2006). Project Management Handbook Version 1.1. https://www.projectmanagement-training.net/wordpress/wp-content/uploads/2015/11/book_project_management.pdf