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Database Application System Development Life Cycle: Phase 1

For my project, I want to tackle a real issue we face in my job at the TXST Student Learning Assistance Center, specifically in "the STUDY" a walk-in tutoring service at Texas State University where students can get help with math, science, and business courses. Currently, every time a student checks in and out, we collect their time stamps, the subject they're receiving tutoring in, and their NetID. But all this data is stored in unorganized spreadsheets. This makes it difficult for our supervisors to gather meaningful insights, like identifying which subjects need the most support, recognizing frequent visitors, or tracking repeat visits. This isn't ideal for collaborating with other departments either. For instance, some students have mandatory tutoring requirements due to academic probation or extra-credit assignments, but they currently rely on paper logs to track their visits.

To solve these issues, I will create a database application that will organize and track our student information in a more structured way. With this system, record-keeping will be more efficient, and will allow for better analysis of trends, like spotting peak times or subjects in high demand. It will also let us share verified data with other university departments, making it easier to support students who need tutoring as part of other academic programs.

Another area in need of organization is our new small group tutoring sessions, which are designed for specific Living Learning Communities (LLCs). Although we manage scheduling for these sessions through Navigate TXST, we do not currently have a system to track attendance or session data for the students in these groups. Since LLC tutoring is more personal and targeted, tracking this data would give us better insights into how the service is working and help us figure out the best ways to support each community's academic needs.

With a more structured data system, our team could also make smarter decisions around staffing. During peak times, like exams or project/assignment deadlines, we usually see a surge in demand. By keeping track of seasonal trends and specific subject needs, we could plan our scheduling better and make sure we have enough staff on hand when demand is highest. This would make staffing more responsive and ensure that students get the support they need.

To meet these goals, I will build on tools and data collection methods we already have in place — like our check-in forms at the front desk, the scheduling tool for group sessions, and the occasional student feedback surveys. I will expand on these tools to capture a wider range of data and unify it in a single database. I also want to replicate data from past reports so we can maintain continuity and build on those insights to

support better decision-making. This database project will help bring much-needed organization and adaptability to our tutoring services, making sure we’re ready to meet students’ evolving needs.