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| Julie Sweany | |
|  | Your Answers The answer cells below are set up for double spacing – do not change that! Do not write more than one half page for each answer. |
| **1** | Basic Responsibilities |
| |  |  | | --- | --- | | **Responsibility** | **Description** | | Maintenance | Monitor and configure the server; maintain log files. | | Design | Design and create databases. | | Security | Maintain user accounts; secure server and its databases. | | Backup | Backup databases regularly; restore database if necessary; migrate data to another server if necessary. | | Miscellaneous | Start/stop database when necessary; optimize server; update software when necessary; enable and manage replication if necessary. | |  |  | |  |  | |  |  | |  |  | |

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| **2** | Log files |
| |  |  | | --- | --- | | **Log File** | **Description** | | General | Text file that contains record of client connections, SQL statements received from clients, and other information. | | Error | Text file that contains messages about server startup and shutdown. | | Slow query | Text file that contains SQL statements that take a long time to run. | | Binary | One or more binary files containing a record of changes made to the database. Can be used with backups to restore a database after a crash or to enable replication between a master server and a slave server. | | Relay | One or more binary files that are used on a slave machine to relay any changes that have been made on the master machine. Only necessary for use in replication. | |  |  | |  |  | |  |  | |  |  | |

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| **3** | Securing the College database |
| |  |  | | --- | --- | | **Role/Group** | **Description of how you’d handle security** | | Students | Would have SELECT, INSERT, and DELETE privileges for SectionID field of the Registration table to look up, add, drop, or delete classes. | | Faculty | Would have INSERT privileges for Grade field of the Registration table to give students grades. | | Admissions staff | Would have SELECT, INSERT, UPDATE and DELETE privileges for Student table to add or drop students or update their information. | | HR | Would have SELECT, INSERT, UPDATE, and DELETE privileges for Faculty table to add, delete or make changes to faculty information. | | Financial staff/Accounting | Would have SELECT privileges for Salary field of Faculty table and Scholarship field of Student table to access needed financial info. | | IT staff | Database Administrator would have full access; otherwise it would depend on specific role within IT. | | Administrators/Heads of Departments | Would have SELECT, INSERT, UPDATE, and DELETE privileges for Section and Course tables to establish sections of courses offered. Administrators have SELECT, INSERT, and DELETE privileges for Department and Major tables; INSERT privileges for Semester table. | |  |  | |