No. _____
Date _____

NAME : VANNESS M. LAO

SECTION : BSIT 3-IN

SUBJECT : DATABASE ADMINISTRATION

SIGNATURE = JD.

1.) DATA ADMINISTRATION

→ DATA ADMINISTRATION IS ALL ABOUT MANAGING AND ORGANIZING DATA IN A DATABASE. IT'S SUPER IMPORTANT BECAUSE IT HELPS MAKE SURE THAT DATA IS ACCURATE, SECURE, AND EASY TO ACCESS FOR EVERYONE WHO NEEDS IT. FOR EXAMPLE, DURING MY PROJECT LAST SEMESTER, QUIZLITE, I HAD TO CREATE A STRUCTURED WAY TO ORGANIZE USER DATA SO THAT IT COULD BE EASILY ACCESSED BY THE APPLICATION. A DATA ADMINISTRATOR'S KEY JOBS INCLUDE SETTING RULES FOR DATA MANAGEMENT, CHECKING THE QUALITY OF DATA, AND CONTROLLING WHO CAN ACCESS THE DATA TO KEEP IT PROTECTED.

2.) DATABASE ADMINISTRATOR (DBA) RESPONSIBILITIES

→ A DATABASE ADMINISTRATOR, OR DBA, IS MAINLY RESPONSIBLE FOR SETTING UP, UPDATING, AND TAKING CARE OF DATABASE SYSTEMS. FOR INSTANCE, WHEN WE WERE DEVELOPING THE DYNAMIC BLOG PLATFORM, I HELPED SET UP THE DATABASE AND MADE SURE IT WAS RUNNING SMOOTHLY. DBAS KEEP AN EYE ON HOW THE DATABASE IS PERFORMING, MAKE SURE IT'S SECURE, AND PERFORM BACKUPS TO AVOID LOSING DATA. AS TECHNOLOGY HAS ADVANCED, DBAS NOW USE CLOUD DATABASES, AUTOMATE SOME OF THEIR TASKS, AND USE COOL TOOLS LIKE AI TO HELP IMPOVE HOW DATABASES WORK.

3.) IMPORTANCE OF DATA SECURITY

→ DATA SECURITY IS REALLY IMPORTANT IN MANAGING DATABASES BECAUSE IT PROTECTS SENSITIVE INFORMATION FROM BEING STOLEN OR ACCESSED BY PEOPLE WHO SHOULDN'T SEE OR VIEW IT. IN MY EXPERIENCE, THERE'S A TIME WHEN I LEARNED ABOUT DATA BREACHES IN CLASS, AND IT MADE

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ME REALIZE HOW CRUCIAL IT IS TO KEEP OUR DATA SAFE. FOR EXAMPLE, TO KEEP DATA SECURE, DBAs OFTEN USE STRONG PASSWORDS, ENCRYPT SENSITIVE INFORMATION (WHICH LOCKING IT UP), REGULARLY CHECK FOR SECURITY ISSUES, AND UPDATE THEIR SOFTWARE TO FIX ANY VULERABILITIES.

4.) DATA AVAILABILITY

→ DATA AVAILABILITY MEANS MAKING SURE THE DATA IS ACCESSIBLE WHENEVER USERS OR APPLICATIONS NEED IT. THIS IS CRITICAL FOR BUSINESSES BECAUSE OF THE FACT THAT IF DATA ISN'T AVAILABLE, IT CAN LEAD TO LOST PRODUCTIVITY AND CUSTOMERS. IN ONE OF MY NETWORK PROJECTS, WE HAD TO ENSURE THAT THE DATA FOR OUR SIMULATIONS WAS ALWAYS ACCESSIBLE. TO ENSURE HIGH AVAILABILITY, DBAs DO THINGS LIKE KEEP REGULAR BACK UPS, SET UP REPLICATION (WHICH IS BASICALLY COPYING DATA TO MULTIPLE PLACES), AND HAVE FAILOVER SYSTEMS IN PLACE TO QUICKLY SWITCH TO A BACK UP IF SOMETHING GOES WRONG.

5.) DATA QUALITY IN DATABASE MANAGEMENT

→ DATA QUALITY IS ABOUT ENSURING THAT THE INFORMATION IN THE DATA BASE IS ACCURATE, COMPLETE, AND CONSISTENT. HAVING HIGH-QUALITY DATA IS ESSENTIAL FOR MAKING GOOD DECISIONS AND RUNNING OPERATIONS SMOOTHLY. FOR EXAMPLE, WHEN I WORKED ON CREATING FLASHCARDS FOR MY STUDIES, I HAD TO MAKE SURE THAT THE DATA WAS NOT ONLY CORRECT BUT ALSO ORGANIZED IN A WAY THAT WAS EASY TO UNDERSTAND. SOME IMPORTANT ASPECTS OF DATA QUALITY INCLUDE ACCURACY (MAKING SURE DATA IS CORRECT), COMPLETENESS (NO MISSING INFORMATION), CONSISTENCY (DATA LOOKS THE SAME ACROSS DIFFERENT SYSTEMS), TIMELINESS (DATA IS UP-TO-DATE), AND VALIDITY (DATA FOLLOWS THE CORRECT FORMATS). DBAs CAN HELP IMPROVE DATA QUALITY BY DOING REGULAR CHECKS, USING TOOLS TO CLEAN UP ANY ERRORS, AND SETTING STANDARDS FOR DATA ENTRY TO KEEP DATA IN GOOD SHAPE.