

ASSIGNMENT #1

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NAME AND DESCRIBE THREE APPLICATIONS YOU HAVE USED THAT EMPLOYED A DATABASE SYSTEM TO STORE AND ACCESS PERSISTENT DATA

1. HEALTHCARE ELECTRONIC RECORDS RETRIEVAL (SALESFORCE/ WEBARC)

- USE DATABASE TO STORE LAW FIRM CLIENT'S INFORMATION SUCH AS NAME, DOB, SSN, WHILE MAINTAINING A LIST OF REQUESTS NEEDED TO FULFILL A CASE. IT ALSO MANAGES THE STREAMLINE OF MEDICAL RECORDS WHILE STORING INTERACTIONS, PROGRESS UPDATES AND CUSTOMER RELATIONSHIP WITH THE FIRM.

2. ONLINE CALENDARS

- USE DATABASE TO STORE CALENDAR EVENTS, AND PREFERENCES. MANAGES THE DATES, TIME OR REMINDERS BY SENDING NOTIFICATIONS. THIS CAN BE ACCESSED IN DIFFERENT PLACES OR DEVICES AND ORGANIZES DAILY INFORMATION THAT COULD BE SHARED TO DIFFERENT USERS.

3. GYM APPLICATION/WEBSITE

- STORES CUSTOMERS INFORMATION, SUCH AS USERNAME, EMAIL, CREDIT CARD INFORMATION, CLASSES, LIST OF CLIENTS, AND INSTRUCTOR REGISTRATION. ALLOWING ACCESS BY INDIVIDUALS TO VIEW TIMES, SCHEDULES AND MANAGE MEMBERSHIPS. FACILITATES HANDLING ATTENDANCE, MEMBERSHIP AGREEMENTS, AND KEEPING UP WITH MOST POPULAR CLASSES

PROPOSE THREE APPLICATIONS IN DOMAIN PROJECTS (E.G. CRIMINOLOGY, ECONOMICS, BRAIN SCIENCE, ETC.)

- CRIMINAL RECORD SYSTEM
 - PURPOSE: TO PREVENT REPEATING CRIMES, MANAGE SANCTIONING, RESTORE RECORDS BY IDENTIFYING PROBLEM AND/OR AREA.
 - FUNCTIONS: KEEP INDIVIDUALS NAMES (USER AND INDIVIDUAL PROFILES), TYPE OF CRIME, BEHAVIOR PATTERNS, TRAINING BY POLICE
 - INTERFACE DESIGN : AREAS/ CRIMES, CALENDAR, USER INFORMATION, DASHBOARD
- WEATHER COMMUNITY NETWORK
 - PURPOSE: TO PREVENT/ ADVICE LOW-INCOME INDIVIDUALS AFFECTED BY CLIMATE RISK DUE TO GEOGRAPHIC CONDITIONS, CLIMATE, LIMITED ABILITY TO ADAPT, AND LOW ACCESS TO RESOURCES. REPRESENTATIVES WILL PROVIDE RESOURCES, OR APPLY POLICIES DEPENDING ON HOW AFFECTED AN AREA IS.
 - FUNCTIONS: WEATHER RISK TIPS, COMMUNITY ASSEMBLY/DISCUSSIONS, GUIDE ON WEATHER EFFECTS/TIMELINE , LOCAL REPRESENTATIVE ATTENTION TO AFFECTED AREAS TO IMPLEMENT POLICY.
 - INTERFACE DESIGN : DASHBOARD KEEPING UP WITH WEATHER OR POTENTIAL RISKS IN THE AREAS. USER FRIENDLY INTERACTIONS SUCH AS LINKS, FORMS, THAT ARE HIGHLIGHTED AND EASILY VIEWABLE. CLEAR ERROR MESSAGES, MINIMIZED USER CLUTTER BY KEEPING STRUCTURED LAYOUT AND THEMES.
- REMOTE WELLNESS INSTRUCTOR PROGRAM
 - PURPOSE: FOR INDIVIDUALS TO OBTAIN TRAINING AND FITNESS ADVICE .
 - FUNCTIONS: KEEP INDIVIDUAL'S GOALS, TRACKS PROGRESS, ONLINE SESSIONS (WITHOUT HAVING TO NECESSARILY GO TO A GYM), AND CUSTOMIZED PLANS.
 - INTERFACE DESIGN : WORKOUT/ MEAL PREPPING VIDEOS. USER FRIENDLY ANIMATIONS SHOWING OPTIONS TO KEEP TRACK WITH EVERY SET AND WEIGHT USED. PROGRESS CHARTS AND PERSONAL MESSAGES FROM INSTRUCTORS.

DESCRIBE AT LEAST THREE TABLES THAT MIGHT BE USED TO STORE INFORMATION IN A SOCIAL-NETWORK/SOCIAL MEDIA SYSTEM SUCH AS TWITTER OR REDDIT.

- TABLE ONE -USER ACCOUNT (USER_ACCOUNT)
 - USERNAME, PASSWORD, EMAIL, DATE OF BIRTH, PRONOUNS, LOCATION, AVATAR
- TABLE TWO – “LIKES” TABLE (USER_LIKES)
 - USER ID, ID OF OTHER USER, AMOUNT OF LIKES/INTERACTIONS, TIME STAMP
- TABLE THREE - INDIVIDUAL/SHARED POSTS OR QUESTIONS (USER SHARES)
 - TIME STAMP, TEXT, USER ID OF SHARER, USER ID FOR INDIVIDUAL THAT POSTED

IF DATA CAN BE RETRIEVED EFFICIENTLY AND EFFECTIVELY, WHY DATA MINING IS NEEDED?

DATA MINING CAN BE DETRIMENTAL OR BENEFICIAL, DEPENDING UPON THE ENTITY CONDUCTING IT AND PURPOSE BEHIND THE ANALYSIS. ALTHOUGH DATA CAN BE RETRIEVED EFFICIENTLY, DOES NOT EQUATE TO ACCURACY OR SIMPLICITY, PARTICULARLY CONSIDERING THE CONTEXT OF THE RELATIONSHIPS AND INFORMATION BEING UTILIZED. DATA MINING ALLOWS INDIVIDUALS OR BUSINESSES TO CONTINUALLY DISCOVER MODELS, PATTERS OR RELATIONSHIPS THAT INFLUENCE PREDICTIONS, BEHAVIOR OR FUTURE SHIFTS. IT IS IMPORTANT TO RECOGNIZE THAT THE ABSENCE OF A PARTICULAR RELATIONSHIP IN ONE DATABASE, DOES NOT MEAN THE POSSIBILITY FOR ANOTHER PERSON/BUSINESS UNCOVERING DISTINCTIVE INSIGHTS. THEREFORE, DATA MINING REMAINS ESSENTIAL, IF USED MINDFULLY AND CAREFULLY (WITH PERMISSION) FOR EXPLORING PERSPECTIVES AND UNCOVERING VALUABLE CONNECTIONS WITHIN DATASETS, INDIVIDUALS, SALES, ETC.

EXPLAIN THE FOLLOWING DIAGRAM. WHAT IS IT CALLED?

- ENTITY RELATION DIAGRAM
- RELATIONSHIP SET *MEMBER*
- *TWO STRONG ENTITY SETS INSTRUCTOR AND DEPARTMENT , RELATED TO BINARY RELATIONSHIP SET “MEMBER”*

