计算机科学与技术学院 数据库系统 课程实验报告

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| 实验题目：综合实验2 | | 学号：202300130183 |
| 日期：2024/12/10 | 班级：23级人工智能 | 姓名：宋浩宇 |
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| 实验软件和硬件环境：  实验软件：  系统：Windows 11 家庭中文版23H2 22631.4317  编辑器：Visual Studio Code  数据库：SQL Server 2022  数据库管理工具：Microsoft SQL Server Management Studio 18  硬件环境：  CPU：13th Gen Intel(R) Core(TM) i9-13980HX 2.20 GHz  内存：32.0 GB (31.6 GB 可用)  磁盘驱动器：NVMe WD\_BLACKSN850X2000GB | | |
| 实验步骤：  第一题  a)  SQL:  SELECT      \*  FROM      VIDEO  WHERE      VID = 35;  结果：  结果图1-a  b)  SQL:  SELECT      [USER].\*  FROM [USER]  JOIN POST ON [USER].UID = POST.UID  JOIN VIDEO ON POST.VID = VIDEO.VID  WHERE VIDEO.VID = 35;  结果：  结果图1-b  c)  SQL:  SELECT      COUNT(\*) AS "Number of Watching Videos"  FROM      WATCH  WHERE      WATCH.VID = 35;  结果：  结果图1-c  d)  SQL:  SELECT      COUNT(\*) AS "Number of Liked Videos"  FROM      [LIKE]  WHERE      [LIKE].VID = 35;  结果：  结果图1-d  e)  SQL:  SELECT      COUNT(\*) AS "Number of Collect on Videos"  FROM      [COLLECT]  WHERE      [COLLECT].VID = 35;  结果：  结果图1-e  f)  SQL:  SELECT      COALESCE(SUM(COIN.AMOUNT),0) AS "Number of Coins the Videos"  FROM      COIN  WHERE      COIN.VID = 35;  结果：  结果图1-f  g)  SQL:  SELECT      \*  FROM      [COMMENT]  WHERE      [COMMENT].VID = 35  ORDER BY VIDEO\_TIME;  结果：  结果图1-g  第二题：  SQL:  SELECT      \*  FROM      (          SELECT              [NICKNAME],              COUNT(\*) AS NUM          FROM              [USER]              JOIN POST              ON [USER].UID = POST.UID          GROUP BY              [USER].UID      )  ORDER BY      NUM DESC LIMIT 5;  结果：  结果图2  第三题：  SQL:  SELECT      NICKNAME,      PROFILE,      [USERLEVEL],      NUM  FROM      (          SELECT              UID\_FOLLOWED,              COUNT(\*) AS NUM          FROM              FOLLOW          GROUP BY              UID\_FOLLOWED      ),      [USER]  WHERE      UID\_FOLLOWED = USER.UID  ORDER BY      NUM DESC LIMIT 10;  结果：  结果图3  第四题：  SQL:  SELECT      VIDEO.[NAME],      VIDEO.CONTENT,      T.NUM  FROM      VIDEO,      (          SELECT              VID,              COUNT(\*) AS NUM          FROM              WATCH          GROUP BY              VID      )     AS T  WHERE      VIDEO.VID = T.VID  ORDER BY      T.NUM DESC LIMIT 10;  结果：  结果图4  第五题：  SQL:  SELECT      VIDEO.CHANEL,      COUNT(\*) AS [SUM]  FROM      VIDEO      JOIN WATCH      ON VIDEO.VID = WATCH.VID  GROUP BY      VIDEO.CHANEL;  结果：  结果图5  第六题：  SQL:  SELECT      VIDEO.[NAME],      VIDEO.CONTENT,      T.NUM  FROM      VIDEO,      (          SELECT              VID,              COUNT(\*) AS NUM          FROM              WATCH          GROUP BY              VID      ) AS T  WHERE      VIDEO.VID = T.VID      AND VIDEO.CHANEL = "美食"  ORDER BY      T.NUM DESC LIMIT 5;  结果：  结果图6  第七题：  SQL:  SELECT      VIDEO.CHANEL,      COUNT(\*) AS SUM  FROM      VIDEO      JOIN WATCH      ON WATCH.VID = VIDEO.VID      JOIN [USER]      ON [USER].UID = WATCH.UID  WHERE      [USER].UID = 15  GROUP BY      CHANEL  ORDER BY      SUM DESC LIMIT 5;  结果：  结果图7  第八题：  SQL:  SELECT      VIDEO.NAME,      VIDEO.DESCRIPTION  FROM      VIDEO      JOIN WATCH      ON VIDEO.VID = WATCH.VID  WHERE      WATCH.UID = 15      AND WATCH.TIME > 900;  结果：  结果图8  第九题：  SQL:  SELECT      [USER].NICKNAME,      [USER].PROFILE,      [USER].USERLEVEL  FROM      FOLLOW      JOIN [USER]      ON [USER].UID = FOLLOW.UID\_FOLLOWER  WHERE      UID\_FOLLOWED = 15;  结果：  结果图9  第十题：  SQL:  SELECT      VIDEO.NAME,      VIDEO.DESCRIPTION,      POST.POST\_TIME  FROM      VIDEO      JOIN POST      ON POST.VID = VIDEO.VID      JOIN FOLLOW      ON FOLLOW.UID\_FOLLOWED = POST.UID  WHERE      FOLLOW.UID\_FOLLOWER = 15  ORDER BY      POST.POST\_TIME DESC;  结果：  结果图10  第十一题：  SQL:  SELECT      NICKNAME,      PROFILE,      USERLEVEL  FROM      [USER]  WHERE      (USER.UID, 15) IN (          SELECT              UID\_FOLLOWER,              UID\_FOLLOWED          FROM              FOLLOW      )      AND (15, USER.UID) IN (          SELECT              UID\_FOLLOWER,              UID\_FOLLOWED          FROM              FOLLOW      );  结果：  结果图11 | | |