Andrew Plum

Professor Jamil

CS 360

9/26/2023

Semester Project Time Log

Note:

All of the time logged here is any of the time that went towards completing the project after 9/26/2023. This includes everything from time spent programming the project to time spent during meetings with instructors and team members. The time spent during each session will have a description of how the time contributed to the project.

Sessions:

1. Started 10/2/2023 at 12:34 pm and finished 10/2/2023 at 1:26 pm.
   1. Met with Kalol to discuss how to start the project.
      1. Directed us to create prototype database and store values to it using from a prototype html interface made by us which will be like the one on project 360.
         1. We will use php for the backend.
         2. We are building a prototype first because the interface is very complex and not modular to the point where we can simply interact with one portion of the interface.
            1. It is all interconnected.
            2. The prototype will give Kalol a good idea of if we have grasped the system design.
            3. The prototype will also give an idea of how integrate the prototype or a slightly altered prototype if needed into the system.
2. Started 10/17/2023 at 12:24 pm and finished 10/17/2023 at 6:19 pm.
   1. Worked on creating prototype interface
   2. Worked on creating database tables
3. Started 10/17/2023 at 7:47 pm and finished 10/18/2023 at 1:08 am.
   1. Finished creating prototype interface
   2. Finished creating database tables
   3. Found out later the prototype interface was unnecessary
4. Started 10/25/2023 at 3:38 pm and finished 10/25/2023 at 6:52 m
   1. Planned algorithm implementation
      1. Created check steps
5. Started 10/21/2023 at 2:07 pm and finished 10/21/2023 at11:32 pm
   1. Consider different ways to implement the evaluation system
      1. Considered calculating F\* from F
         1. Basically creating a book of truth of sorted possible FDs and the FD references used to derive the FDs and comparing if student’s submission was in the book of truth
            1. This would quickly become too much to calculate so we needed another way
      2. Represent the FDs in binary and use binary operators to create functions that checked if a derived FD and its references followed the technical definition of its justification
         1. The functions would follow the technical definitions of the justifications just in binary
         2. This is what we decided to implement as it was feasible and more straightforward
6. Started 10/25/2023 at 3:41 pm and finished 10/25/2023 at 6:56 pm.
   1. Created test arrays
   2. Started ValidFormatChecker
   3. Modified database tables
7. Started 10/28/2023 at 12:58 pm and finished 10/28/2023 at 6:02 pm.
   1. Finished ValidFormatChecker
   2. Created CycleChecker
   3. Created ReflexivityCheck
8. Started 10/28/2023 at 11:07 pm and finished 10/29/2023 at 2:18 pm
   1. Started GivenCheck
   2. Created UnionCheck
   3. Created TransitivityCheck
   4. Created UnionCheck
   5. Created DecompositionCheck
9. Started 10/29/2023 at 6:22 pm and finished 10/30/2023 at 2:01 am
   1. Finished GivenCheck
   2. Fixed AugmentationCheck
   3. Created PseudoTransitivityCheck
   4. Started creating examples of FDs to test with checking function and to present at 2nd demo
   5. Started on the attribute closure algorithm
10. Started 10/30/2023 at 8:10 pm and finished 10/31/2023 at 1:28 am
    1. Started working on attribute closure function
       1. Started testing and fine tuning function
    2. Started writing code to pull data from the database
11. 10/31/2023 at 9:28 pm and finished 11/1/2023 at 2:16 am
    1. Created test output for logical consequence of F
       1. Displays whether or not the FD’s failed or passed the test
       2. Did lots of testing here to make sure everything worked well
       3. Made good examples to show narrow cases
    2. Modified database tables
       1. Some previous progress here was lost and had to be redone
12. 11/1/2023 at 10:59 pm and finished 11/2/2023 at 2:19 am
    1. Modified test output for logical consequence of F
       1. Made it display the functional dependencies inputted along with their respective evaluation result
       2. Created a binary conversion function
    2. Worked on presentation 2 powerpoint
    3. Continued working on code to pull data from the database
       1. Started to figure out how to structure the data to feed it to the existing evaluation functions
13. 11/6/2023 at 12:30 pm and finished 11/6/2023 at 1:22 pm
    1. Met with Kalol to further discuss project design details
14. 11/7/2023 at 3:30 pm and finished 11/7/2023 at 4:16 pm
    1. Met with Professor Jamil to further discuss project design details
15. 11/10/2023 at 7:57 pm and finished 11/10/2023 at 10:40 pm
    1. Implemented suggestions made by instructors
       1. Slightly modified the database structure
       2. Modified attribute closure implementation
16. 11/14/2023 at 12:08 am and finished 11/14/2023 at 5:17 am
    1. Created main loop for demonstration purposes
       1. All of the algorithms we have are here and based on the question type loaded in the database, the specific algorithm pertaining to the question type is called
    2. Worked a bit on the candidate keys
    3. Made a power point presentation for lab demo 2