Advanced Database Systems - Phase 1

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1 Hardware Specification

| Operating System | 64-bit Windows10 |
|------------------|--------------------------|
| CPU | Core i7-7700HQ @2.80 GHZ |
| RAM | 16 GB |
| Hard Disk | 1 TB HDD,128 GB SDD |

2 ER Diagram

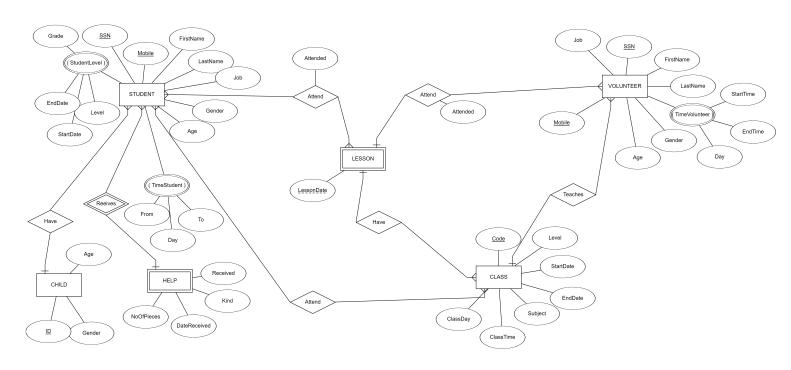


Figure 1: ER Diagram

3 Database Statistics

Number of Tables: 12

Table 1: Database Statistics

| Table Name | Row Count | Main Key | Indexes | FK |
|---------------|-----------|----------|---------|----|
| Child | 100135 | YES | 1 | 1 |
| Class | 3000 | YES | 2 | 1 |
| Help | 5844 | NO | 2 | 0 |
| HelpReceived | 5844 | YES | 3 | 3 |
| Lesson | 3000 | NO | 3 | 2 |
| Student | 997747 | YES | 2 | 0 |
| Studentclass | 59021 | YES | 2 | 2 |
| Studentlesson | 59050 | YES | 3 | 3 |
| Studentlevels | 130482 | YES | 2 | 1 |
| Timestudent | 58917 | YES | 1 | 1 |
| Timevolunteer | 3000 | YES | 1 | 1 |
| Volunteer | 99960 | YES | 1 | 0 |

| Name | Engine | Version | Row_format | Rows | Avg_row_length | Data_length | Max_data_length | Index_length | Data_free | Auto_increment | Create_time |
|---------------|--------|---------|------------|--------|----------------|-------------|-----------------|--------------|-----------|----------------|---------------------|
| child | InnoDB | 10 | Compact | 100135 | 36 | 3686400 | 0 | 0 | 4194304 | NULL | 2019-12-09 18:48:50 |
| class | InnoDB | 10 | Compact | 3000 | 65 | 196608 | 0 | 65536 | 0 | 9037 | 2019-12-10 21:54:49 |
| help | InnoDB | 10 | Compact | 5844 | 47 | 278528 | 0 | 147456 | 0 | NULL | 2019-12-09 18:48:50 |
| helpreceived | InnoDB | 10 | Compact | 5844 | 50 | 294912 | 0 | 327680 | 0 | NULL | 2019-12-09 18:48:50 |
| lesson | InnoDB | 10 | Compact | 3000 | 54 | 163840 | 0 | 147456 | 0 | NULL | 2019-12-09 18:48:50 |
| student | InnoDB | 10 | Compact | 997747 | 76 | 76120064 | 0 | 18399232 | 6291456 | NULL | 2019-12-09 18:48:50 |
| studentclass | InnoDB | 10 | Compact | 59021 | 26 | 1589248 | 0 | 1589248 | 4194304 | NULL | 2019-12-09 18:48:50 |
| studentlesson | InnoDB | 10 | Compact | 59050 | 44 | 2637824 | 0 | 4227072 | 4194304 | NULL | 2019-12-09 18:48:50 |
| studentlevels | InnoDB | 10 | Compact | 130482 | 52 | 6832128 | 0 | 3686400 | 4194304 | NULL | 2019-12-10 21:54:49 |
| timestudent | InnoDB | 10 | Compact | 58917 | 44 | 2637824 | 0 | 0 | 4194304 | NULL | 2019-12-11 07:47:52 |
| timevolunteer | InnoDB | 10 | Compact | 3000 | 43 | 131072 | 0 | 0 | 0 | NULL | 2019-12-11 07:46:04 |
| volunteer | InnoDB | 10 | Compact | 99960 | 78 | 7880704 | 0 | 0 | 4194304 | 100001 | 2019-12-09 18:48:50 |

Figure 2: Status