|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| STU\_ID | | | STU\_  NAME | | | CLASS\_  CODE | | CLASS\_  NAME | CLASS\_  CREDHRS | | | INSTR\_  NAME | CLASS\_  DAYS | | | CLASS\_  TIMES | | ROOM |
| 1668983 | | | William Brown | | | CIS 200-01 | | Software Development II | 3 | | | Wright | T,TH | | | 2:30PM – 3:45PM | | Davidson Hall 306 |
| 1668983 | | | William Brown | | | CIS 310-02 | | Database Design | 3 | | | Guan | M,W | | | 2:30PM – 3:45PM | | School of Business 101 |
| 1668983 | | William Brown | | | | CLAW 301-01 | Legal Environment of Business | | 3 | | Smith | | M,W | | | 9:30 AM-10:45AM | | School of Business 222 |
| 1668983 | | William Brown | | | | CIS 320-02 | Systems Analysis and Structure | | 3 | | Barker | | T,TH | | | 9:30AM-10:45AM | | School of Business 008 |
| 1668983 | | William Brown | | | | CIS 350-01 | Infrastructure Tech | | 3 | | Zurada | | T,TH | | | 11:00AM-12:45PM | | School of Business 008 |
| 1668899 | | Student A | | | | CIS 200-01 | Software Development II | | 3 | | Wright | | T,TH | | | 2:30PM-3:45PM | | Davidson Hall 306 |
| 1668899 | | Student A | | | | CIS 310-02 | Database Design | | 3 | | Guan | | M,W | | | 2:30PM-3:45PM | | School of Business 101 |
| 1668899 | Student A | | | | CLAW 301-01 | | | Legal Environment of Business | | 3 | | Smith | | M,W | | 9:30AM-10:45AM | | School of Business 222 |
| 1668899 | Student A | | | FIN 301-01 | | | | Corporate Finance | | 3 | | Brandi | | M,W | | 8:00AM-9:15AM | | School of Business 106 |
| 1549090 | Student B | | | FIN 301-01 | | | | Corporate Finance | | 3 | | Brandi | | M,W | | 8:00AM-9:15AM | | School of Business 106 |
| 1549090 | | Student B | | CIS 350-01 | | | | Infrastructure Tech | | 3 | | Zurada | | | T,TH | 11:00AM-12:15PM | School of Business 008 | |
| 1549090 | | Student B | | CIS 320-02 | | | | Systems Anal&Design | | 3 | | Barker | | | T,TH | 9:30AM-10:45AM | School of Business 008 | |
| 1549090 | | Student B | | CLAW 301-01 | | | | Legal Environment of Business | | 3 | | Smith | | | M,W | 9:30AM-10:45AM | School of Business 222 | |

William Brown

A1 CIS310-02

c) There are multiple points of redundancy in this database, STU\_NAME category, STU\_ID category, CLASS\_CODE category, CLASS\_NAME category, CLASS\_CREDHRS category, INSTR\_NAME category, CLASS\_TIMES category, as well as ROOM category. Each of these categories has multiple inputs that are the same but have to be individually updated or removed. These redundancies open up an opportunity for anomalies. An update anomaly is a common issue in databases organized in the same way as this one. For example, if a student’s name needs to be updated or if a student’s ID number needs to be updated, then it has to be manually changed for every single entry. This creates the update anomaly, where having to manually change all the information could lead to not all of the required changes to each field being made successfully and so the data becomes inconsistent. These inconsistencies could be as simple as a misspelling or differentiation in punctuation between different entries. When data becomes inconsistent, it loses its integrity and so accurate observations cannot be made from the data set.