Data Dictionary:

1. calculatedGPA (double): calculated GPA for a given student
2. completeGradeRecord (data structure): contains all fields found in recordData with an additional value for credit hours for the given entry.
3. completeGradeRecords(list): 1d list of completeGradeRecord.
4. courseRecord (data structure): contains course prefix, course name, year, semester, and hours
5. fileList(1d list): list of strings, each entry is a filename
6. fileName(string): name of a single file
7. folderList (1d list): list of strings, each entry is a folderName
8. folderName(string): name of a single folder
9. folderFileList (2d list): 2 dimensional list of strings, column is folder name, row is file name
10. GPA (double): interim GPA values during summation calculation in 1.4.3
11. gradeReport (file): File containing the formatted grade report of the selected student
12. message (string): Message to the user regarding the status of the system
13. pointValue (int): Value 0 to 4, A being 4, B being 3, decreasing down by grade to 0
14. recordData (data structure): Data in a student record including studentID, studentName, coursePrefix, courseNumber, grade, year, and semester.
15. retrievedRecordData ( data structure): Single Record data retrieved from the database, same structure as recordData, can be null.
16. searchData (data structure): Data found in recordData except each field has the option to be null
17. studentID (int): ID of a given student
18. studentGradeRecords (list): an list of studentGradeRecord containing all matching results from a search
19. searchResultOption (binary): a binary value received from the user selecting either edit or delete with a highlighted search result (0 = edit, 1 = delete).
20. studentGradeRecord (data structure): single instance of recordData for a given student with additional course hour field for the given course
21. studentRecord (data structure): contains studentID, name, and OverallGPA of a student
22. queryParameters (list): list of strings for values to match in SQL statement
23. queryStatement (string): string containing the SQL statement to execute

Level 0 ( Context Level) DFD: The Student Grade Management System



Level 1 DFD: Subsystems



Level 2 DFD: P1 Add Grade Record



Level 2 DFD: P2 Search Grade Results



Level 2 DFD: P3 Print Grade Report



Level 2 DFD: P4 Import Grades From Excel



Level 3 DFD: P1.2 Verify Grade Record Existence



Level 3 DFD: P1.3 Save Grade Record



Level 3 DFD: P1.4 Update GPA



Level 3 DFD: P2.2 Search Database for Records



Level 3 DFD: P2.4 Execute User Search Option



Level 3 DFD: P3.2 Verify Student ID



Level 3 DFD: P3.3 Query All Records for Student



Level 3 DFD: P3.4 Construct Grade Report



Level 3 DFD: P4.1 Register Matching Folders



Level 3 DFD: P4.2 Register Matching Files



Level 3 DFD: P4.3 Remove Existing Entries



Level 3 DFD: P4.4 Create New Records



Level 4 DFD: P1.4.3 Calculate Overall GPA



Level 4 DFD: P2.4.2 Update Student Grade Record



Level 4 DFD: P2.4.3 Delete Student Grade Record



Level 4 DFD: P4.3.5 Remove Existing Courses from List



Level 5 DFD: P2.4.2.5 Calculate Overall GPA



Level 5 DFD: P.2.4.3.5 Calculate Overall GPA

