DATA 200 LAB-1
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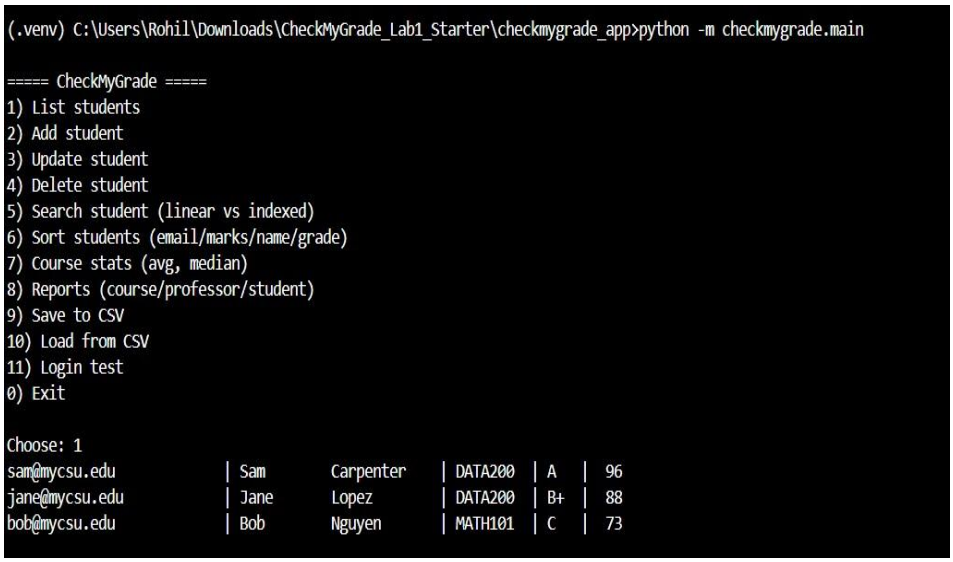
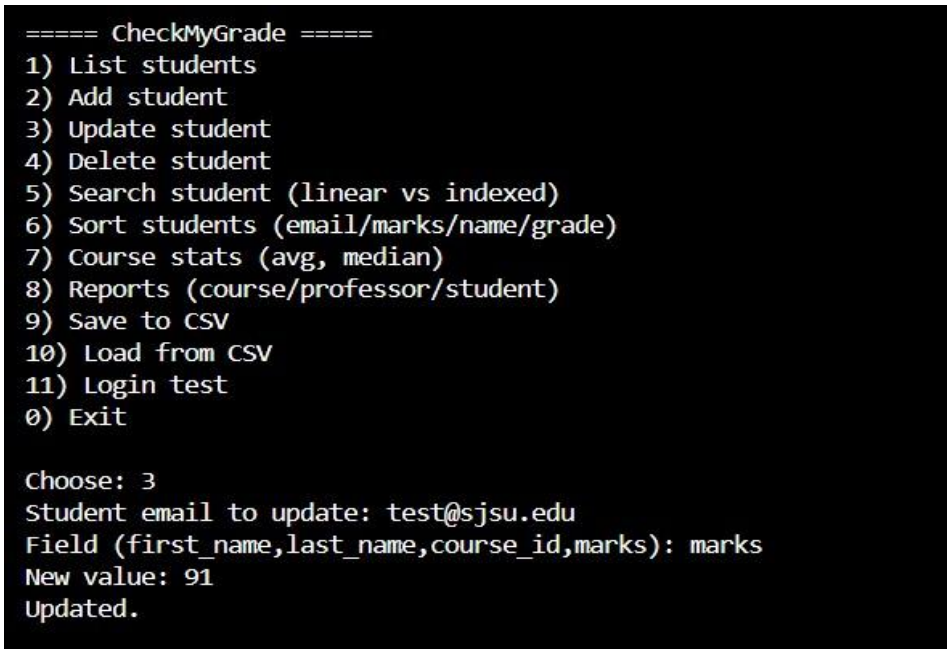
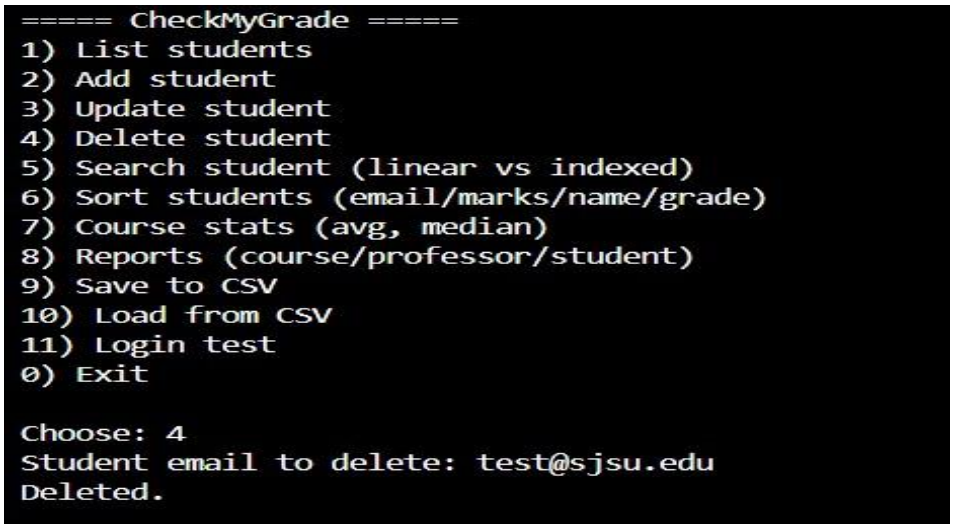
Github link: https://github.com/rohilutture/CheckMyGrade_Lab1

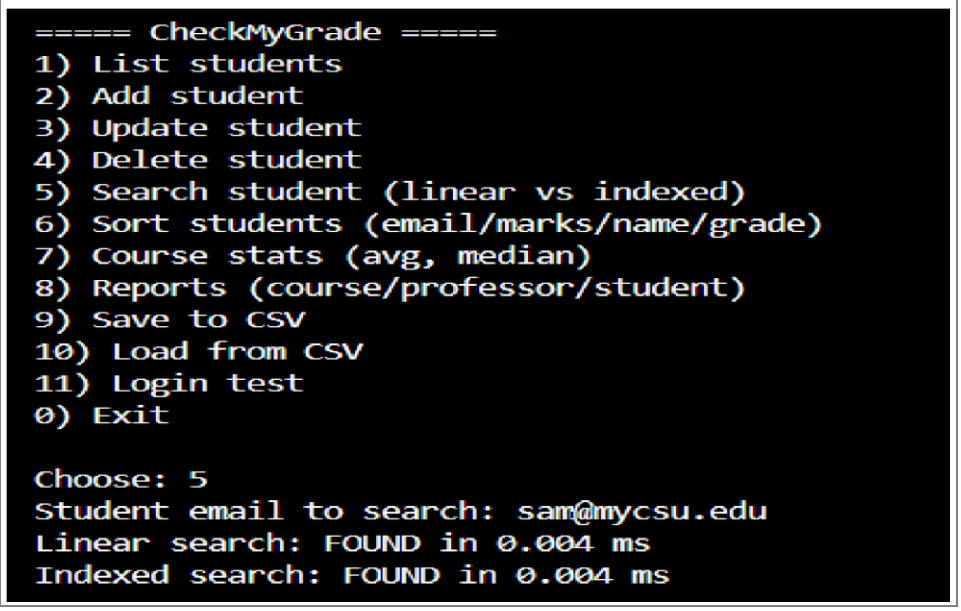
Outputs

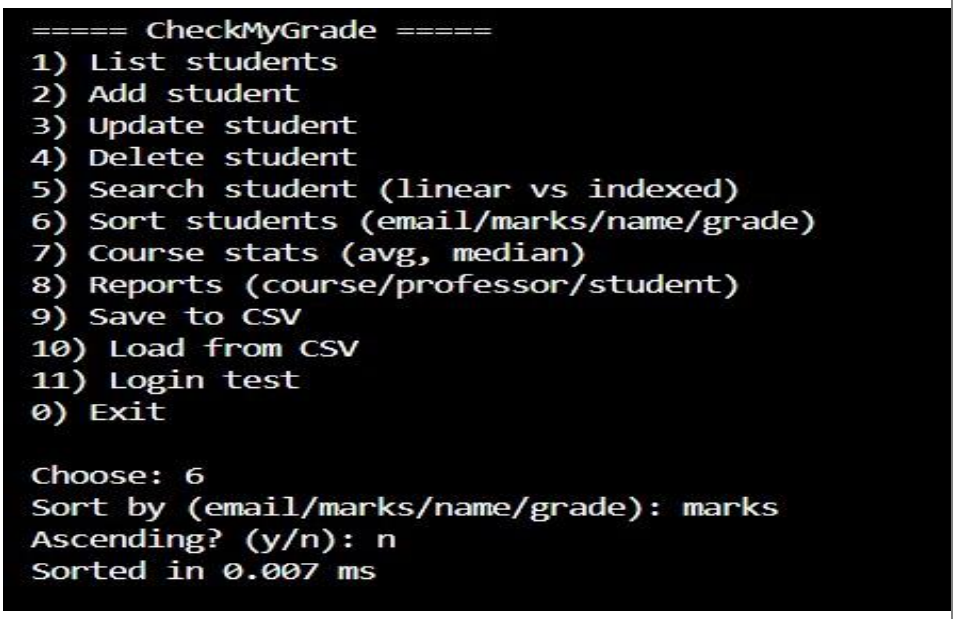
Step	Menu Option	Description	Screenshot
1	List Students	Displays all current student records.	

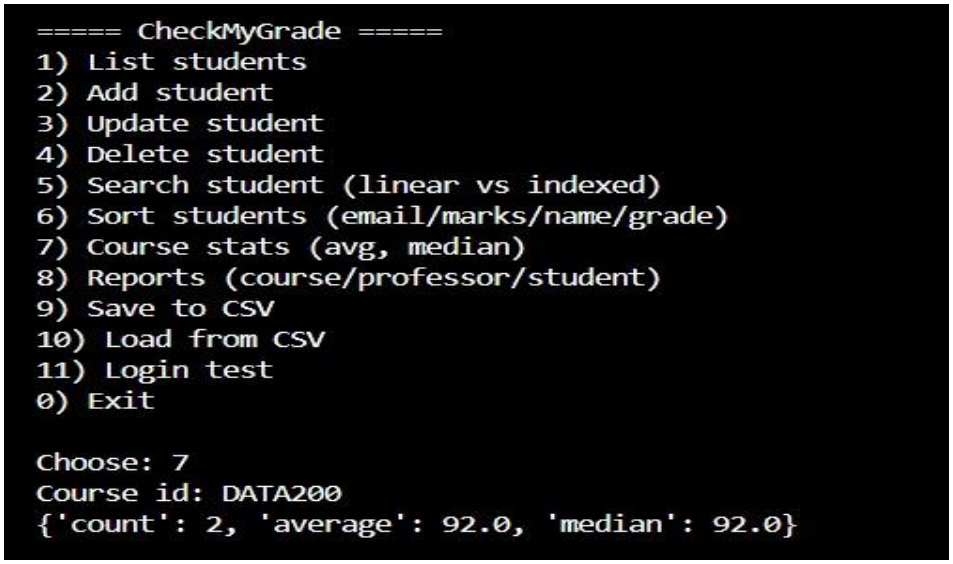
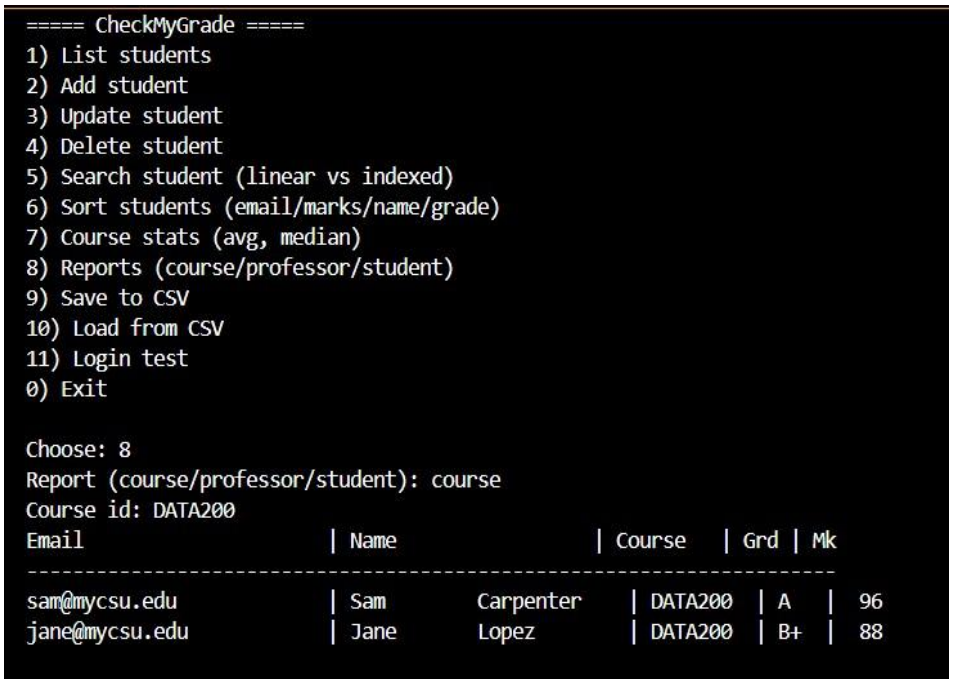
2	Add Student	Adds a new student record with email, name, course, and marks.	

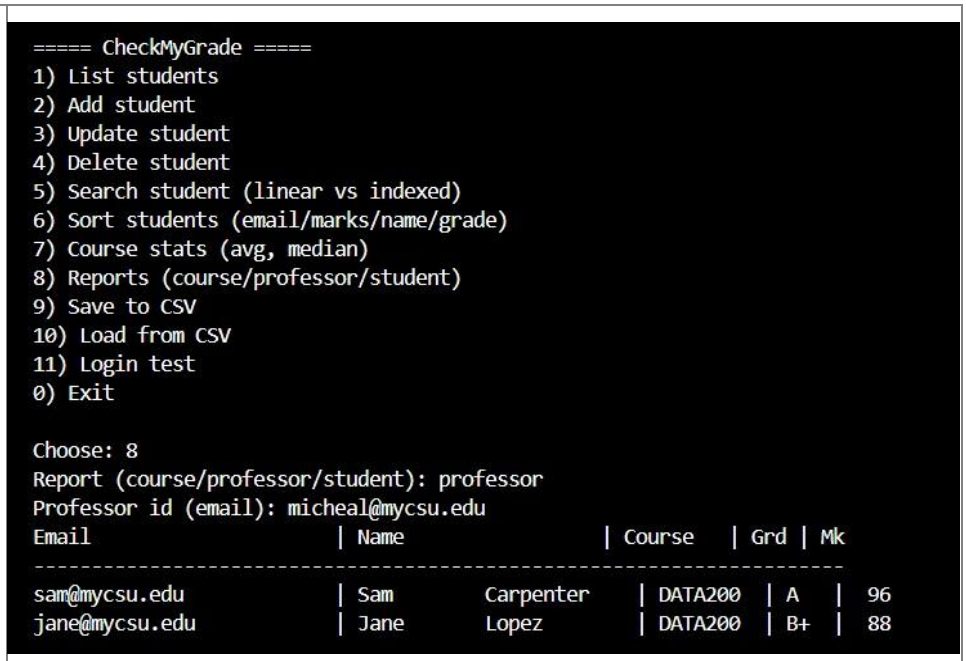
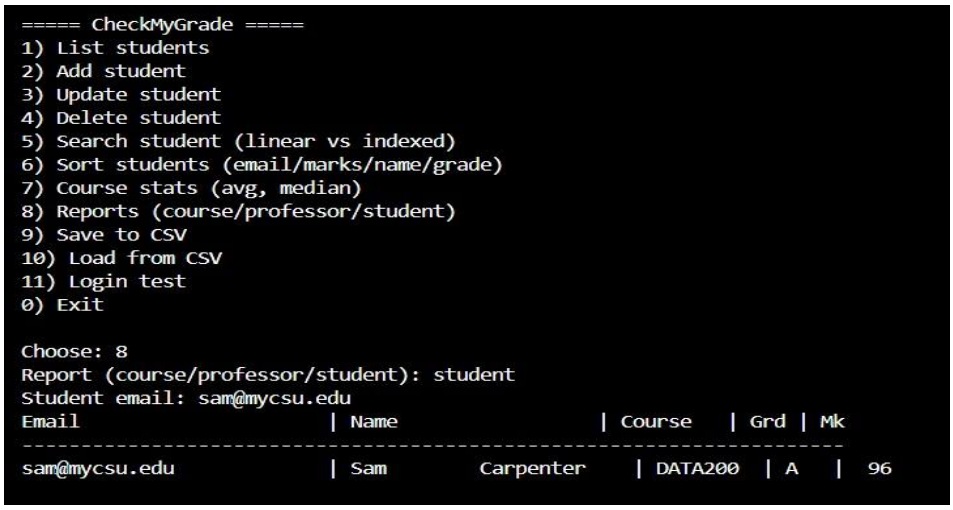
3	Update Student	Updates a student's marks or other fields.	

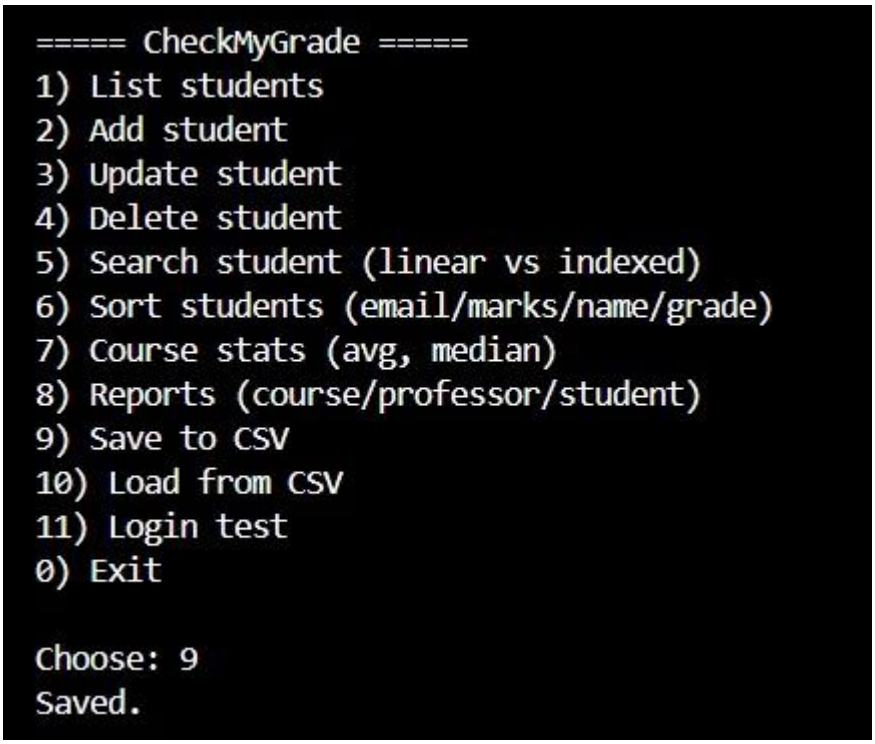
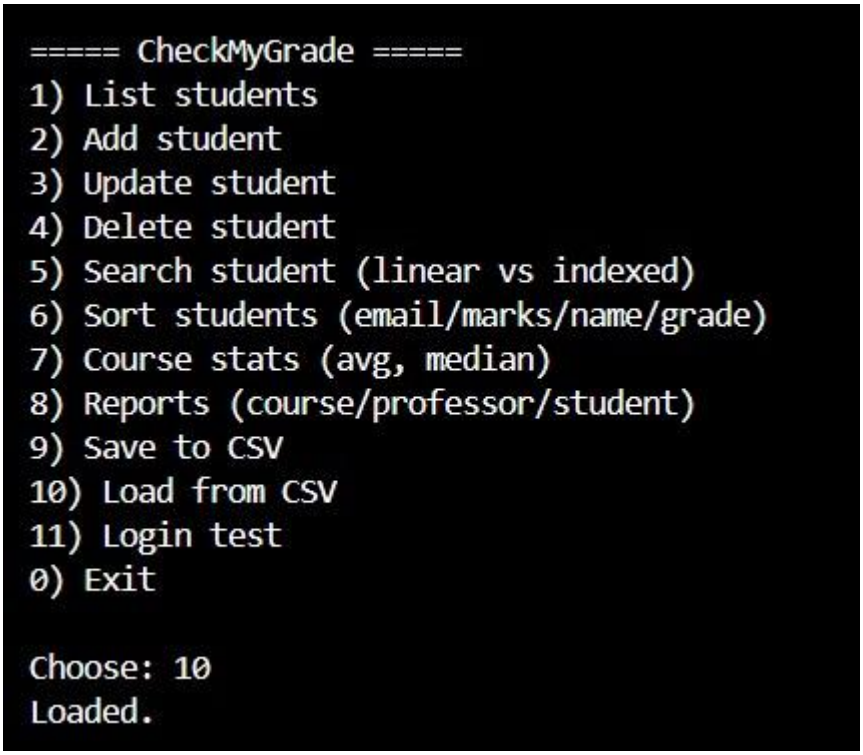
4	Delete Student	Deletes a student record by email.	

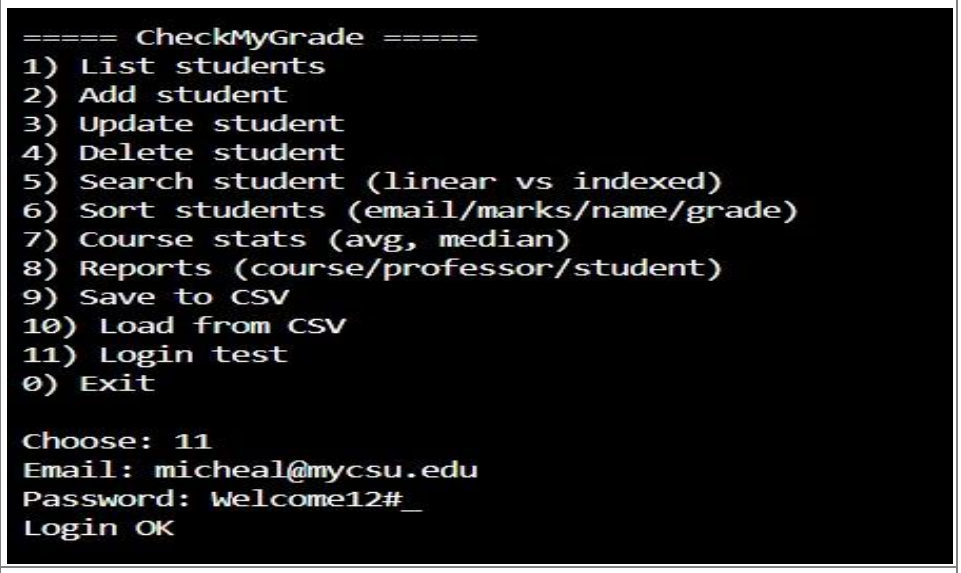
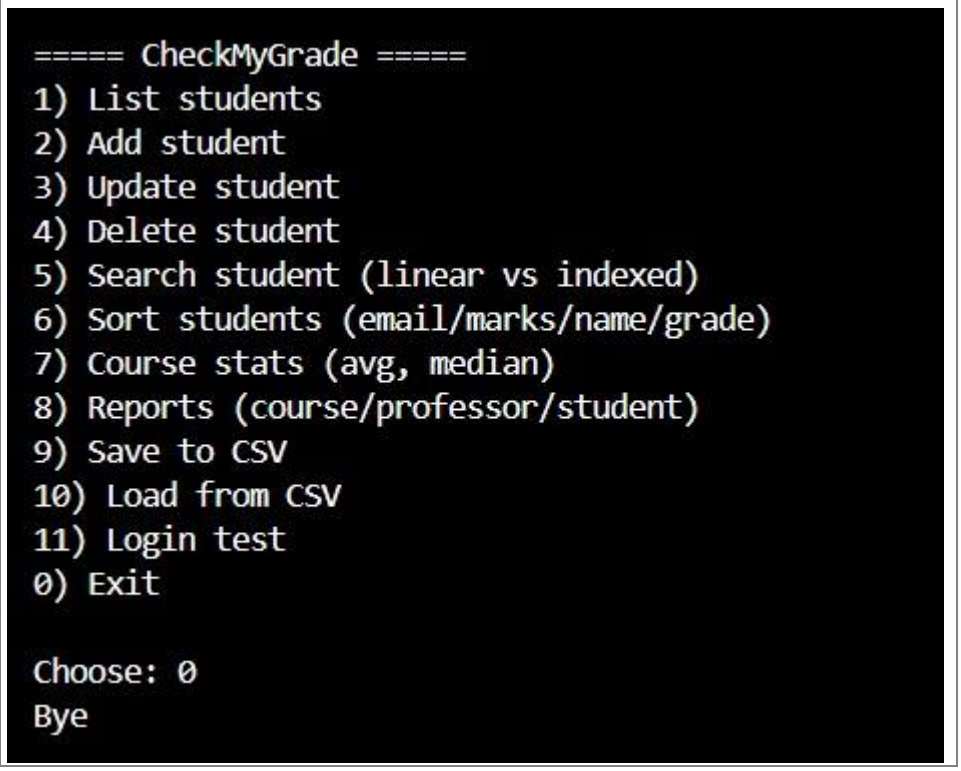
5	Search Student	Compares linear vs indexed search with timing result	

6	Sort Students	Sorts records by email, marks, name, or grade and prints sort timing.	

7	Course Statistics	Shows average and median marks for a selected course.	
8a	Course Report	Displays students in a specific course.	

8b	Professor Report	Displays students taught by a specific professor.	
8c	Student Report	Displays report for one specific student.	

9	Save to CSV	Saves all current records to CSV files.	
10	Load from CSV	Loads data from CSV files into memory.	

11	Login Test	Verifies login using encrypted password from file.	
0	Exit	Exits the application.	

		students.csv	Email_address,First_name,Last_name,Course.id,grades,Marks sam@mycsu.edu,Sam,Carpenter,DATA200,A,96 jane@mycsu.edu,Jane,Lopez,DATA200,B+,88 bob@mycsu.edu,Bob,Nguyen,MATH101,C,73
		Unit Test	(.venv) C:\Users\Rohil\Downloads\CheckMyGrade_Lab1_Starter\checkmygrade_app>python -m unittest discover -s tests -v test_course_professor_crud (test_app.CheckMyGradeTests.test_course_professor_crud) ... ok test_encryption (test_app.CheckMyGradeTests.test_encryption) ... ok test_search_timing (test_app.CheckMyGradeTests.test_search_timing) ... --- Timing: Search (linear vs indexed) --- Target: jamie0@sjsu.edu Linear: 0.001 ms Indexed: 0.001 ms ok test_sorting (test_app.CheckMyGradeTests.test_sorting) ... ok test_stats_and_reports (test_app.CheckMyGradeTests.test_stats_and_reports) ... ok test_student_crud (test_app.CheckMyGradeTests.test_student_crud) ... ok -- Ran 6 tests in 0.350s OK

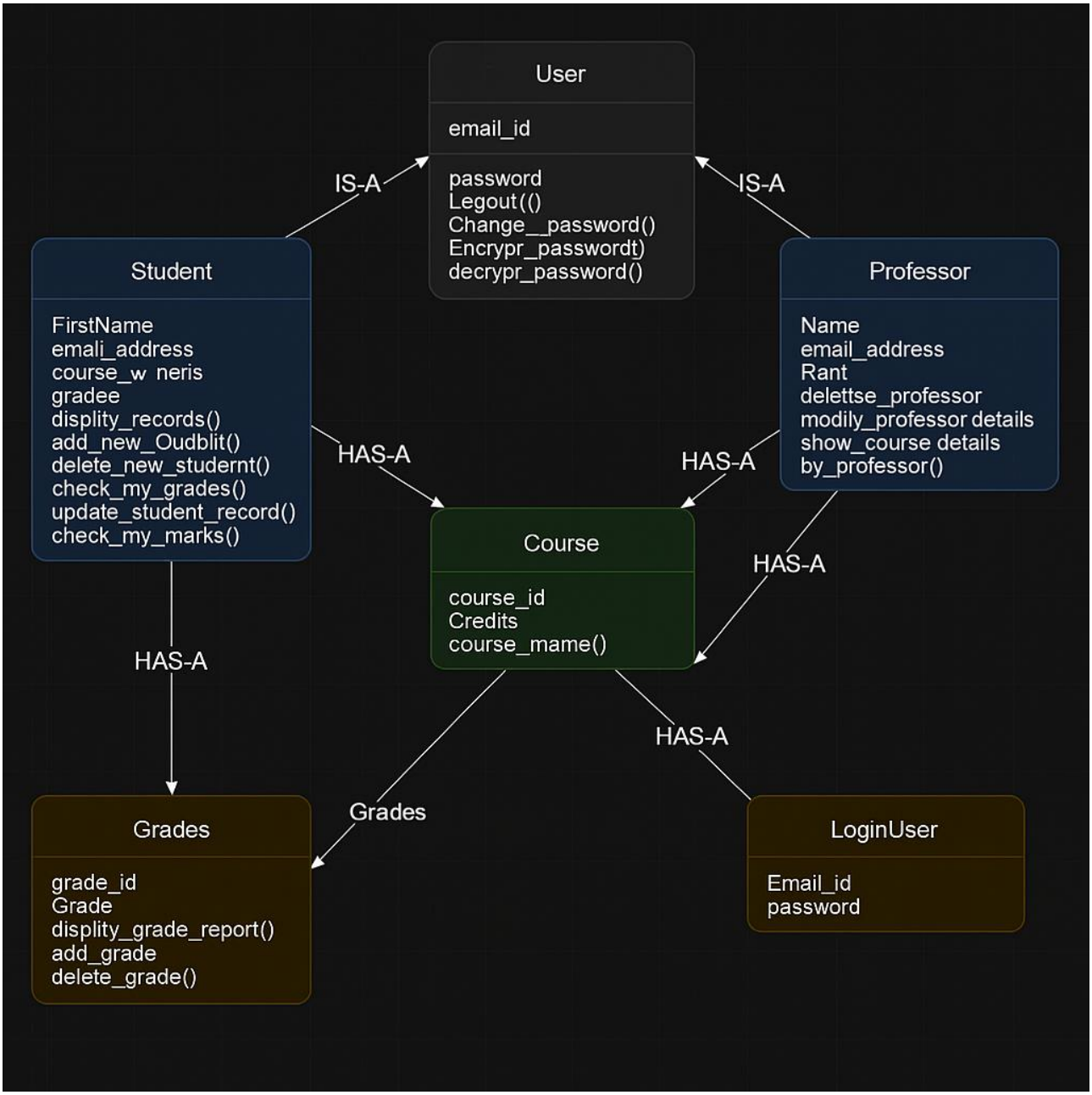


Figure 1:Diagram showing the IS/HAS-A relationships