

My Project

Student Grade Tracker.

My project name is **Student Grade Tracker**. It can add student info (ID, name, grade). I can save students in .txt file. I can load students back. I can search student by ID using binary search. It shows all students.

What I use

- int for ID
- string for name
- float for grade
- Student class
- GradeBook class
- Pointer for dynamic array (Student* students)
- Array to store students
- Binary search to find ID
- File I/O save/load .txt file

User add student → give ID, name, grade

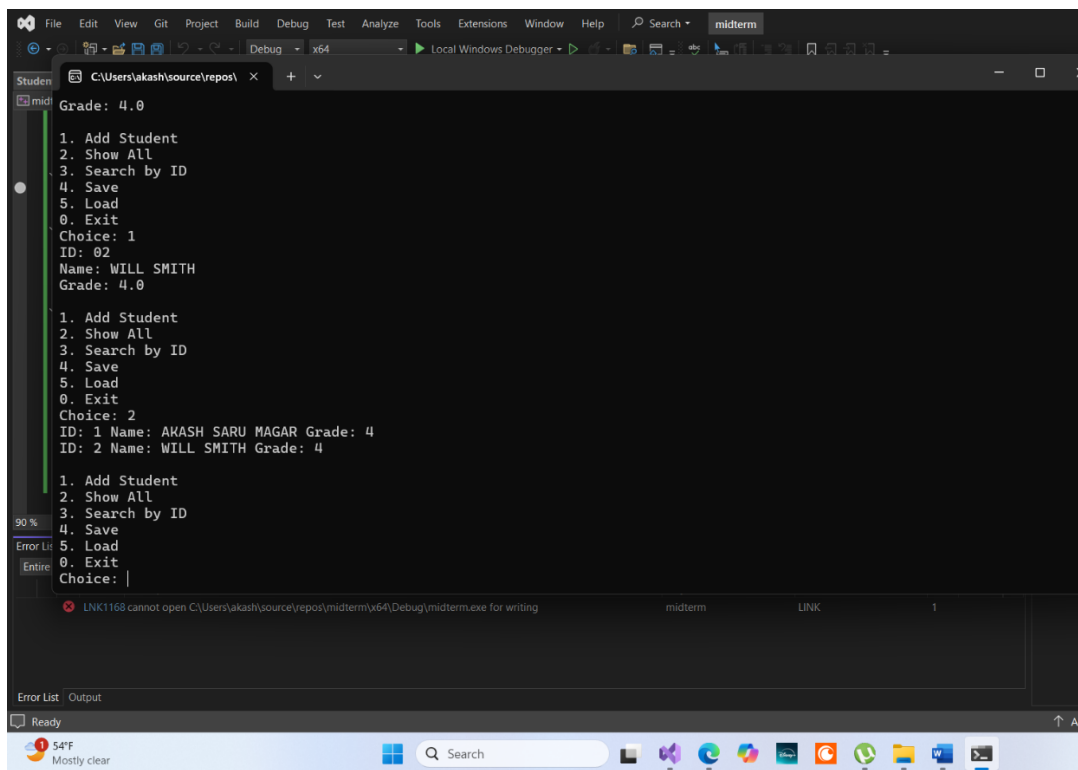
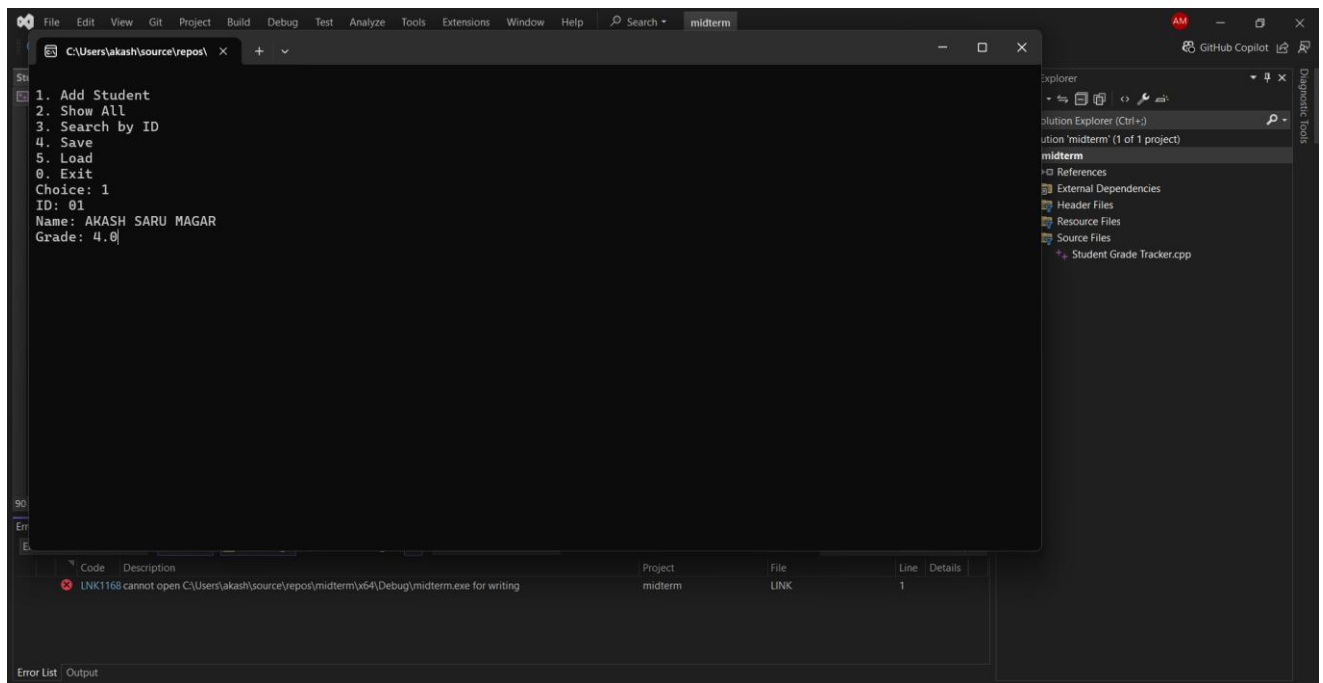
Program store in array → resize if full

User can see all students

User can search student by ID → binary search

Can save all to file students.txt

Can load all back from file



The screenshot shows a Windows IDE with the following components:

- Menu Bar:** File, Edit, View, Git, Project, Build, Debug, Test, Analyze, Tools, Extensions, Window, Help.
- Toolbar:** Includes icons for file operations, search, and debugging.
- Debugger Window:**
 - Process:** Local Windows Debugger (x64)
 - Stack:** Shows the current function call stack.
 - Registers:** Displays CPU registers.
 - Memory:** Shows memory addresses and values.
 - Output:** Displays the program's output, including student names and grades.
- Source Code Window:**
 - File:** C:\Users\akash\source\repos\midterm\midterm.exe
 - Code:**

```

1. Add Student
2. Show All
3. Search by ID
4. Save
5. Load
0. Exit
Choice: 2
ID: 1 Name: AKASH SARU MAGAR Grade: 4
ID: 2 Name: WILL SMITH Grade: 4

1. Add Student
2. Show All
3. Search by ID
4. Save
5. Load
0. Exit
Choice: 3
ID: 02
ID: 2 Name: WILL SMITH Grade: 4

1. Add Student
2. Show All
3. Search by ID
4. Save
5. Load
0. Exit
Choice: |

```
- Status Bar:**
 - 90 %**: Indicates the current line of code.
 - Error List:** Shows any compilation or runtime errors.
 - Entire**: A button to view the entire error list.
 - LINK1168 cannot open C:\Users\akash\source\repos\midterm\midterm.exe for writing**: A warning message.
 - midterm**: The name of the current project.
 - LINK**: A button to view the linker output.

The screenshot displays a Windows IDE with a C++ program for a student database. The program uses a linked list to store student records. The output shows three menu-driven operations: adding a student, displaying all students, and saving the data. The first two operations are successful, but the third operation to save the data fails with an error message: "LNK1168 cannot open C:\Users\akash\source\repos\midterm\Debug\midterm.exe for writing".

```

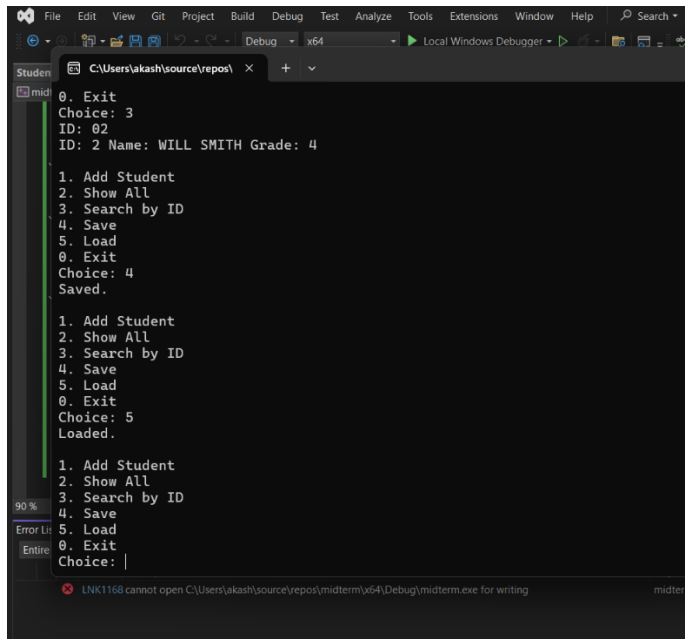
File Edit View Git Project Build Debug Test Analyze Tools Extensions Window Help Search midterm
C:\Users\akash\source\repos\midterm\Debug\midterm.exe
Student
Choice: 2
ID: 1 Name: AKASH SARU MAGAR Grade: 4
ID: 2 Name: WILL SMITH Grade: 4

1. Add Student
2. Show All
3. Search by ID
4. Save
5. Load
0. Exit
Choice: 3
ID: 02
ID: 2 Name: WILL SMITH Grade: 4

1. Add Student
2. Show All
3. Search by ID
4. Save
5. Load
0. Exit
Choice: 4
Saved.

1. Add Student
2. Show All
3. Search by ID
4. Save
5. Load
0. Exit
Choice: |
90 %
Error List
Entire
LNK1168 cannot open C:\Users\akash\source\repos\midterm\Debug\midterm.exe for writing
midterm

```



```
0. Exit
Choice: 3
ID: 02
ID: 2 Name: WILL SMITH Grade: 4

1. Add Student
2. Show All
3. Search by ID
4. Save
5. Load
0. Exit
Choice: 4
Saved.

1. Add Student
2. Show All
3. Search by ID
4. Save
5. Load
0. Exit
Choice: 5
Loaded.

1. Add Student
2. Show All
3. Search by ID
4. Save
5. Load
0. Exit
Choice: |

Error List
Entire
LNK1168 cannot open C:\Users\akash\source\repos\midterm\Debug\midterm.exe for writing
```

Problems

I got error with pointer resize, I fix with new and delete[]. Binary search index mistake, I test with sorted IDs then fix. File not save first, I check file open.

Done by

Akash Saru Magar