**Option 1: Storing an ArrayList**

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**Option 1: Storing an ArrayList**

For this week's Critical Thinking Assignment, I selected Option #1, which involves storing student objects in an ArrayList and implementing a custom selection sort algorithm.

This Java program defines a Student class with the required fields: rollno, name, and address. An ArrayList<Student> was used to store 10 hard-coded student objects. Two custom comparator classes were created:

1. `NameComparator` - compares students alphabetically by name.

2. `RollnoComparator` - compares students by their roll number.

Rather than using any built-in sorting methods from Java’s Collections framework, I implemented a selection sort algorithm in a separate file named SelectionSorter.java. This class contains a static method that takes in an ArrayList<Student> and a Comparator<Student> to perform the sorting.

**Conclusion**

This project demonstrated how to store and manipulate objects using an ArrayList in Java. By implementing custom comparator classes and a manual selection sort algorithm, I gained deeper insight into sorting logic, data structures, and object-oriented principles.

Git repository screenshot and history - <https://github.com/Miriamva216/student-arraylist-sort.git>