TASK 4

Bug.java

```
package ELliteTech;
import java.util.ArrayList;
import java.util.Scanner;

public class Bug {
    private String title;
    private String description;
    private String status; // e.g., Open, In Progress, Resolved
    private String assignedTo;

    public Bug(String title, String description, String status, String assignedTo)
{
        this.title = title;
        this.description = description;
        this.status = status;
        this.assignedTo = assignedTo;
    }

    public String getTitle() {
        return title;
    }

    public void setTitle(String title) {
        this.title = title;
    }

    public String getDescription() {
        return description;
    }

    public void setDescription(String description) {
        this.description = description;
    }

    public String getStatus() {
        return status;
    }

    public void setStatus(String status) {
        this.status = status;
    }

    public String getAssignedTo() {
        return assignedTo;
    }
    public void setAssignedTo(String assignedTo) {
        this.assignedTo = assignedTo;
    }
    @Override
    public String toString() {
        return "Title: " + title + ", Description: " + description + ", Status: "
+ status + ", Assigned To: " + assignedTo;
    }
}
```

BugTracker.java

```
package ELliteTech;

import java.util.ArrayList;
import java.util.Scanner;

public class BugTracker {

    private static ArrayList<Bug> bugs = new ArrayList<>();

    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        int choice = 0;

        do {
            System.out.println("\nBug Tracker Menu:");
            System.out.println("1. Add New Bug");
            System.out.println("2. View Bugs");
            System.out.println("3. Edit Bug");
            System.out.println("4. Delete Bug");
            System.out.println("5. Exit");
            System.out.print("Enter your choice: ");

            if (scanner.hasNextInt()) {
                choice = scanner.nextInt();
                scanner.nextLine(); // Consume newline
            } else {
                System.out.println("Invalid input. Please enter a number between 1
and 5.");
                scanner.nextLine(); // Clear invalid input
                continue;
            }

            switch (choice) {
                case 1:
                    addBug(scanner);
                    break;
                case 2:
                    viewBugs();
                    break;
                case 3:
                    editBug(scanner);
                    break;
                case 4:
                    deleteBug(scanner);
                    break;
                case 5:
                    System.out.println("Exiting Bug Tracker. Goodbye!");
                    break;
                default:
                    System.out.println("Invalid choice. Please try again.");
            }
        } while (choice != 5);

        scanner.close();
    }

    private static void addBug(Scanner scanner) {
        System.out.print("Enter Bug Title: ");
        String title = scanner.nextLine();
        System.out.print("Enter Bug Description: ");
        String description = scanner.nextLine();
        System.out.print("Enter Bug Status (e.g., Open, In Progress, Resolved):
");
        String status = scanner.nextLine();
        System.out.print("Enter Assigned To: ");
        String assignedTo = scanner.nextLine();

        bugs.add(new Bug(title, description, status, assignedTo));
        System.out.println("Bug added successfully.");
    }

    private static void viewBugs() {
        if (bugs.isEmpty()) {
            System.out.println("No bugs available.");
        } else {
            System.out.println("\nBug List:");
            for (int i = 0; i < bugs.size(); i++) {
                System.out.println((i + 1) + ". " + bugs.get(i));
            }
        }
    }

    private static void editBug(Scanner scanner) {
        viewBugs();
        if (!bugs.isEmpty()) {
            System.out.print("Enter the number of the bug to edit: ");
            if (scanner.hasNextInt()) {
                int index = scanner.nextInt() - 1;
                scanner.nextLine(); // Consume newline

                if (index >= 0 && index < bugs.size()) {
                    Bug bug = bugs.get(index);

                    System.out.print("Enter new title (or press Enter to keep \""
+ bug.getTitle() + "\"): ");
                    String newTitle = scanner.nextLine();
                    if (!newTitle.isEmpty()) {
                        bug.setTitle(newTitle);
                    }

                    System.out.print("Enter new description (or press Enter to
keep \"" + bug.getDescription() + "\"): ");
                    String newDescription = scanner.nextLine();
                    if (!newDescription.isEmpty()) {
                        bug.setDescription(newDescription);
                    }

                    System.out.print("Enter new status (or press Enter to keep \""
+ bug.getStatus() + "\"): ");
                    String newStatus = scanner.nextLine();
                    if (!newStatus.isEmpty()) {
                        bug.setStatus(newStatus);
                    }
                    System.out.print("Enter new assigned to (or press Enter to keep \"" + bug.getAssignedTo() + "\"): ");
                    String newAssignedTo = scanner.nextLine();
                    if (!newAssignedTo.isEmpty()) {
                        bug.setAssignedTo(newAssignedTo);
                    }

                    System.out.println("Bug updated successfully.");
                } else {
                    System.out.println("Invalid bug number.");
                }
            } else {
                System.out.println("Invalid input. Please enter a valid number.");
                scanner.nextLine(); // Clear invalid input
            }
        }
    }

    private static void deleteBug(Scanner scanner) {
        viewBugs();
        if (!bugs.isEmpty()) {
            System.out.print("Enter the number of the bug to delete: ");
            if (scanner.hasNextInt()) {
                int index = scanner.nextInt() - 1;

                if (index >= 0 && index < bugs.size()) {
                    bugs.remove(index);
                    System.out.println("Bug deleted successfully.");
                } else {
                    System.out.println("Invalid bug number.");
                }
            } else {
                System.out.println("Invalid input. Please enter a valid number.");
                scanner.nextLine(); // Clear invalid input
            }
        }
    }
}
```

OUTPUT

```
Bug Tracker Menu:
1. Add New Bug
2. View Bugs
3. Edit Bug
4. Delete Bug
5. Exit
Enter your choice: 1
Enter Bug Title: error
Enter Bug Description: sysntak error
Enter Bug Status (e.g., Open, In Progress, Resolved): Resolved
Enter Assigned To: team
Bug added successfully.

Bug Tracker Menu:
```

```
1. Add New Bug
2. View Bugs
3. Edit Bug
4. Delete Bug
5. Exit
Enter your choice: 2

Bug List:
1. Title: error, Description: sysntak error, Status: Resolved, Assigned To: team

Bug Tracker Menu:
1. Add New Bug
2. View Bugs
3. Edit Bug
4. Delete Bug
5. Exit
Enter your choice: 3

Bug List:
1. Title: error, Description: sysntak error, Status: Resolved, Assigned To: team
Enter the number of the bug to edit: compile time error
Invalid input. Please enter a valid number.

Bug Tracker Menu:
1. Add New Bug
2. View Bugs
3. Edit Bug
4. Delete Bug
5. Exit
Enter your choice: 4

Bug List:
1. Title: error, Description: sysntak error, Status: Resolved, Assigned To: team
Enter the number of the bug to delete: 5
Invalid bug number.

Bug Tracker Menu:
1. Add New Bug
2. View Bugs
3. Edit Bug
4. Delete Bug
5. Exit
Enter your choice:
```