OOP Teamwork Assignment

# Project Description

Design and implement a **Work Item Management (WIM)** Console Application.

# Functional Requirements

Application should support multiple **teams**. Each team has **name**, **members** and **boards**.

Member has **name**, list of **work** **items** and **activity** **history**.

* Name should be unique in the application
* Name is a string between 5 and 15 symbols.

Board has **name**, list of **work** **items** and **activity** **history**.

* Name should be unique in the team
* Name is a string between 5 and 10 symbols.

There are 3 types of work items: **bug**, **story** and **feedback**.

## Bug

Bug has ID, title, description, steps to reproduce, priority, severity, status, assignee, comments and history.

* Title is a string between 10 and 50 symbols.
* Description is a string between 10 and 500 symbols.
* Steps to reproduce is a list of strings.
* Priority is one of the following: High, Medium, Low
* Severity is one of the following: Critical, Major, Minor
* Status is one of the following: Active, Fixed
* Assignee is a member from the team.
* Comments is a list of comments (string messages with author).
* History is a list of all changes (string messages) that were done to the bug.

## Story

Story has ID, title, description, priority, size, status, assignee, comments and history.

* Title is a string between 10 and 50 symbols.
* Description is a string between 10 and 500 symbols.
* Priority is one of the following: High, Medium, Low
* Size is one of the following: Large, Medium, Small
* Status is one of the following: NotDone, InProgress, Done
* Assignee is a member from the team.
* Comments is a list of comments (string messages with author).
* History is a list of all changes (string messages) that were done to the story.

## Feedback

Feedback has ID, title, description, rating, status, comments and history.

* Title is a string between 10 and 50 symbols.
* Description is a string between 10 and 500 symbols.
* Rating is an integer.
* Status is one of the following: New, Unscheduled, Scheduled, Done
* Comments is a list of comments (string messages with author).
* History is a list of all changes (string messages) that were done to the feedback.

***Note: IDs of work items should be unique in the application i.e. if we have a bug with ID X then we can't have Story of Feedback with ID X.***

## Operations

Application should support the following operations:

* + **Create a new person**
  + **Show all people**
  + **Show person's activity**
  + **Create a new team**
  + **Show all teams**
  + **Show team's activity**
  + **Add person to team**
  + **Show all team members**
  + **Create a new board in a team**
  + **Show all team boards**
  + **Show board's activity**
  + **Create a new Bug/Story/Feedback in a board**
  + Change Priority/Severity/Status of a bug
  + Change Priority/Size/Status of a story
  + Change Rating/Status of a feedback
  + Assign/Unassign work item to a person
  + Add comment to a work item
  + List work items with options:
    - List all
    - Filter bugs/stories/feedback only
    - Filter by status and/or assignee
    - Sort by title/priority/severity/size/rating

# General Requirements

* + Follow the **OOP best practices**:
    - Use data encapsulation
    - Properly use inheritance and polymorphism
    - Properly use interfaces and abstract classes
    - Properly use static members
    - Properly use enums
    - Follow the principles of strong cohesion and loose coupling
  + Use LINQ Extension methods
  + Implement proper user input validation and display meaningful user messages
  + Implement proper exception handling
  + Use Git to keep your source code and for team collaboration

# Teamwork Requirements

Refer to the teamwork requirements document found along with the project requirements.

# Teamwork defense

Prepare a list of commands to demonstrate how the program works.