***Project 1 – Workflow Tracker***

**Functional Requirements:**

1. The application shall support authentication.
2. The application shall support two roles – admin and user.
3. The application shall collect the following data about each user – First & Last Name, email (will be used as username) and data used for authentication (such as password), last login date as well as an indication whether the user is enabled/disabled.
4. The application shall implement strong authentication, as discussed in class.
5. The application shall allow an admin to define steps that will be used in a workflow:
   1. Create a new step (text only)
   2. Edit existing steps.
   3. Deletion shall not remove existing steps, merely disable them.
      1. Disabled steps shall be visible to the admins **for management**.
      2. Disabled steps shall be visible to users, but only in existing workflows.
      3. Disabled steps shall not be visible/a part of new workflow.
6. The application shall allow a user role to manage projects.
7. Each project shall have a list of associated steps (all of the steps, from the active items in the list above).
8. Upon login, user shall be presented with a list of their projects.
9. User’s access shall be restricted to projects they have access to.
10. Admins shall be able to view all and edit all of the projects.
11. A user shall be able to create a new project. A project will collect the following data:
    1. Project name
    2. User that created it (automated)
    3. Timestamp of creation (automated)
    4. Estimated Date of Completion (Original)
    5. Estimated Date of Completion (Current)
    6. Actual Date of Completion
    7. Progress (in %), based on the number of completed steps vs total steps
    8. A list of users that can edit the project
    9. Status of the project – planned, in process, completed
12. A user shall be able to select, from this list a project to work on.
13. Each step shall collect the following data:
    1. Estimated start date
    2. Estimated end date
    3. Actual start date
    4. Actual end date
    5. Status – planned, in process, blocked, completed
14. When a user changes the status of the step, the application shall require them to provide a justification.
15. The application shall save the justification, as well as a timestamp of the action, the user that carried it out as well as the old and new values.
16. The application shall implement date shift functionality. A user can adjust the ending date (estimated or actual of a step), at which point the application shall allow for the remaining steps to be shifted in bulk.
17. Each step shall also support user entered comments.
18. When saving a comment, the application shall save the comment text, a timestamp, and the user that is inserting the comments.
19. The application shall not support edit or deletion of a comment.
20. Comments shall support upload of file(s). Once uploaded, files cannot be removed by regular user, only by an admin.
21. The application shall support generation of a history report, on both the project as well as step level. In this report all changes, comments and activities shall be displayed.
22. The application shall provide a calendar view on a project level, displaying all of the steps on it.
    1. *Allowed an external library, provided it’s only used for display & you can explain exactly what/how it works.*