Advise System Requirements

The proposed advising system will:
-   Run on premise on Linux-based operating systems
-   Run on virtualized infrastructure
-   Utilize an Oracle database as its back-end repository
-   Utilize ASP.NET as its front-end user/application interface
-   Allow users to log in locally initially (future versions to allow unified organizational credentials or SSO)
-   Utilize configurable role-based security to provide proper access while restricting access to unauthorized individuals necessary
-   Utilize a High-Availability solution by utilizing multiple application servers and hardware load balancing
-   Allow data to be input manually or uploaded via comma-separated value (CSV) file (later versions to integrate with Student Information System (SIS) to reduce the management workload
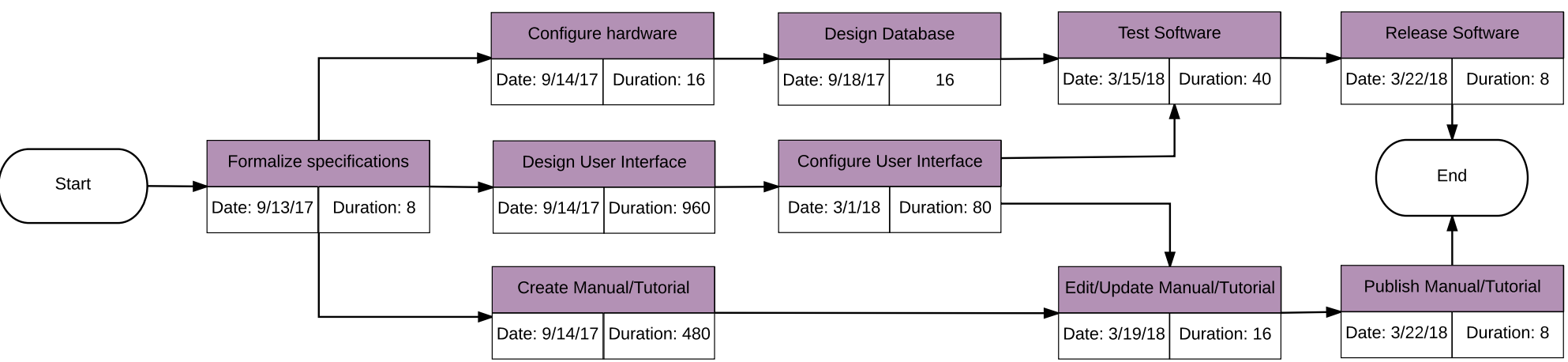
Database structure will:
-   Be a relational database design with tables for storing users, courses, academic history, program requirements while utilizing primary/foreign key relationships for referential integrity

User interface will provide the ability for:
-   Users to log in
-   Administrators to create roles for use within the role-based security framework
-   Administrators to input or upload information (students, instructors, course data, academic history, program requirements)
-   Users to see current course data as well as academic history
-   Student users to review his/her academic history
-   Student users to compare his/her academic history (along with current course load) to his/her program/degree requirements
-   Student users to export the degree requirements and/or comparison reports
-   Advisors to find students
-   Advisors to find the program requirements for the program/degree in question
-   Advisors to review a student's academic history
-   Advisors to compare a student's academic history (along with current course load) to the student's program/degree requirements
-   Functional administrators (Registrars) to create, view, and edit program/degree requirements
-   Functional administrators (Registrars) to create, view, and edit term definitions
-   Functional administrators (Registrars) to view all students and their information

Documentation will:
-   Provide information regarding the database schema and database/application servers
-   Provide information regarding all the aforementioned user interface abilities
-   Be provided to users via a web site for convenient access and update capabilities

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                    ┌─────────────────────────┐      ┌─────────────────────────┐      ┌─────────────────────────┐      ┌─────────────────────────┐
                    │   Configure hardware    │      │     Design Database     │      │      Test Software      │      │    Release Software     │
                    ├───────────┬─────────────┤      ├───────────┬─────────────┤      ├───────────┬─────────────┤      ├───────────┬─────────────┤
                    │Date: 9/14/17│Duration: 16│      │Date: 9/18/17│     16     │      │Date: 3/15/18│Duration: 40│      │Date: 3/22/18│Duration: 8 │
                    └───────────┴─────────────┘      └───────────┴─────────────┘      └───────────┴─────────────┘      └───────────┴─────────────┘

 ┌────────┐     ┌─────────────────────────┐      ┌─────────────────────────┐      ┌─────────────────────────┐
 │ Start  │     │ Formalize specifications│      │   Design User Interface │      │  Configure User Interface│                   ┌────────┐
 │        │     ├───────────┬─────────────┤      ├───────────┬─────────────┤      ├───────────┬─────────────┤                   │  End   │
 └────────┘     │Date: 9/13/17│Duration: 8 │      │Date: 9/14/17│Duration: 960│     │Date: 3/1/18 │Duration: 80│                   └────────┘
               └───────────┴─────────────┘      └───────────┴─────────────┘      └───────────┴─────────────┘

                    ┌─────────────────────────┐                                   ┌─────────────────────────┐      ┌─────────────────────────┐
                    │   Create Manual/Tutorial│                                   │ Edit/Update Manual/Tutorial│     │  Publish Manual/Tutorial│
                    ├───────────┬─────────────┤                                   ├───────────┬─────────────┤      ├───────────┬─────────────┤
                    │Date: 9/14/17│Duration: 480│                                 │Date: 3/19/18│Duration: 16│      │Date: 3/22/18│Duration: 8 │
                    └───────────┴─────────────┘                                   └───────────┴─────────────┘      └───────────┴─────────────┘
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*Duration is in man-hours

ID	Task Mode		Task Name	Duration	Start	Finish	Predecessors	Resource Names
1		📌	**Formalize Specifications**	**8 hrs**	**Wed 9/13/17**	**Wed 9/13/17**		
2		📌?	Determine hosted vs on pr					
3		📌?	Determine hardware Operating System (if on prem)					
4		📌?	Select Database Type/Venc					
5		📌?	Select User Interface (UI) programming language					
6		📌?	Determine UI Functionality					
7		📌?	Determine UI Login Requirements					
8		📌?	Determine UI security requirements					
9		📌?	Determine High Availability (HA)					
10		📌	**Configure hardware**	**16 hrs**	**Thu 9/14/17**	**Fri 9/15/17**	1	
11		📌?	Configure Virtual Machine (VM) for database					
12		📌?	Configure VM for applicatic					
13		📌	**Design database**	**16 hrs**	**Mon 9/18/17**	**Tue 9/19/17**	10	
14		📌?	Create database structure					
15		📌	**Design User Interface**	**960 hrs**	**Thu 9/14/17**	**Wed 2/28/18**	1	
16		📌?	Design Login Screen					
17		📌?	**Design System Admin Interface**					
18		📌?	Design Interface for inputing/editing/upload student/instructor data					
19		📌?	Design Interface for customizing/branding advising system					
20		📌?	Design Advisor Interface					
21		📌?	Design Advisee Interface					

ID	Task Mode	Task Name	Duration	Start	Finish	Predecessors	Resource Names
22		**Design Functional Admin (Registrar Interface)**					
23		Design Interface for inputing term definition					
24		Design Interface for inputing program/degree					
25		Design Interface for inputing/editing/upload course data					
26		Design Interface for inputing/editing/upload student academic					
27		**Configure User Interface**	80 hrs	Thu 3/1/18	Wed 3/14/18	15	
28		Configure Admin Interface					
29		Configure/Upload Course data					
30		Configure/Upload student/instructor data					
31		Configure program/degree					
32		Configure/Upload student academic history					
33		**Create Manuals/Tutorials**	480 hrs	Thu 9/14/17	Wed 12/6/17	1	
34		Describe how to log in					
35		Describe basic navigation techniques					
36		Describe how to select and find program requirements information					
37		**Describe how to find student info**					
38		Describe how to find student					

ID	ⓘ	Task Mode	Task Name	Duration	Start	Finish	Predecessors	Resource Names
39		📌?	Describe how to contact student					
40		📌?	Describe how to find student current course					
41		📌?	Describe how to find student historical academic information					
42		📌?	Describe how to compare program requirements to academic history					
43		📌?	Describe how to export advisee information					
44		📌	**Test Software**	**40 hrs**	**Thu 3/15/18**	**Wed 3/21/18**	27	
45		📌?	Ensure all roles can log in					
46		📌?	Ensure all individuals needing access are imported and security measures are in place					
47		📌?	Ensure system admins can see necessary information					
48		📌?	Ensure registrars can see all students and program requirements					
49		📌?	Ensure registrars can update student or program information					
50		📌?	Ensure advisors can see/find all necessary					
51		📌?	Ensure advisors can see information on students					
52		📌?	Ensure advisees can see current course list					
53		📌?	Ensure advisees can see academic history					

ID	Task Mode	Task Name	Duration	Start	Finish	Predecessors	Resource Names
54	📌?	Ensure advisees can see program requirements					
55	📌?	Ensure advisees can compare program requirements to academic history (including current					
56	📌	Edit/Update Manuals/Tutoria	16 hrs	Mon 3/19/18	Tue 3/20/18	33,15	
57	📌	**Release Software**	**8 hrs**	**Thu 3/22/18**	**Thu 3/22/18**	**44**	
58	📌?	Release software to pilot group					
59	📌?	Announce release to organization					
60	📌?	Provide contact information for					
61	📌	**Release Manuals/Tutorials**	**8 hrs**	**Thu 3/22/18**	**Thu 3/22/18**	**44**	
62	📌?	Provide access to manuals/tutorials to necessary individuals in					