***420-K30-HR – Assignment 1 Systems Maintenance Ramp Up***

Date Assigned: Thursday September 5th, 2024

Date due: **Friday September 13th @ 11:59PM in Moodle. See notes below re interim delivery dates.**

You will be given time during class on **September 5th, 10th, 12th** to work on this assignment. Each class will begin with a short overview of the topic for the day and assignment expectations.

Most of this assignment is individual, but you may work with your teammates while establishing your setup for Part A. Part C involves group work, but everyone must understand branching and merging and learn how to branch and deploy on their own. Also, although you work on things as a group, everyone must provide answers to all sections in their individual submissions.

**Part A is due at the end of class on September 5th.**

**Part B is due at the end of class on September 10th.**

**Part C is due at the end of class on September 12th.**

**Part D is due as the final submission September 13th@ 11:59PM.**

**No assignment submissions will be accepted after the final submission date, i.e., nothing submitted after Friday September 13th @ 11:59PM in Moodle will be accepted.**

**If earlier parts are submitted late, the usual Computer Science late policy (as per the course outline) applies up to the cut-off date of the 13th. However, missing interim delivery deadlines is strongly discouraged.**

Note: If you have completed the part to submit on that day early, work ahead on individual parts.

**Learning Objectives**

Upon successful completion of this assignment, the student will be able to:

* Understand the maintenance requirements for their assigned system;
* Understand the high-level architecture of the system;
* Set up the development environment for the project;
* Understand how to build and run the project they will be working on;
* Do exploratory testing on the system;
* Identify and report on initial problems found with the system;
* Analyze backlog items;
* Understand how to deploy the system; and
* Come up with an initial list of critical items to address in the maintenance project.

**Fall 2023 Projects, Teams, and Customers**

|  |  |  |  |
| --- | --- | --- | --- |
| **Project Name** | **Team** | **Azure Link\*** | **Customer** |
| **Library** | Matteo  Julia Maria  Heraj  Cristian  Christopher | <https://csazure.cegep-heritage.qc.ca:8080/F2023-DevProject/Project%201%20-%20Library%20App> | Connor Spearman |
| **Fitness** | Pierre  Gautam  Benjamin  Parker  Carlos Branimir | <https://csazure.cegep-heritage.qc.ca:8080/F2023-DevProject/Project%202%20-%20Fitness%20App> | Jillian Clarke |
| **Nursing** | Sebastian  Jade  Jacob  Sabrina | <https://csazure.cegep-heritage.qc.ca:8080/F2023-DevProject/Project%203%20-%20Nursing%20App> | Cathy Dufour |
| **HFA** | Pax Bertin  Joshua  Brandon  Ryan  Claude | <https://csazure.cegep-heritage.qc.ca:8080/F2023-DevProject/Project%204%20-%20HFA> | Julien Fournier |

Link to existing AMS on csdev:

<https://csdev.cegep-heritage.qc.ca/Projects/AMS/>

Information about test accounts to use during development will be provided in a separate file on Moodle.

To Start:

1. Make sure you read the **entire assignment** to understand the scope of work.
2. At the beginning of any maintenance project there is a discovery phase where you ramp up on the project and discover what the current artifacts of the system are and what state they are in. Your task in Assignment 1 is to become familiar with your project, understand what it is about, and determine which area(s) you think we should concentrate on for maintenance this term. This will prepare you and your team for meetings with the customer later in the term.
3. Opening status summary:
   1. These projects were all developed from scratch last year by the Dev Projects teams.
   2. None of them are in production yet.
4. Note that you may feel overwhelmed trying to ramp up on unknown projects. This is a normal reaction and why we do a discovery and planning phase early in the maintenance cycle to ensure everyone is established and ready to contribute. There may be many hurdles to getting the systems up and running and becoming familiar with its current state.

To Do:

## **Locally Install and Discover the System (Individual)**

For your response to Part A, rename this document to **YourUserName\_K30\_A01\_PartA.doc** and submit it to Moodle in the appropriate submission folder.

Provide the information/ answers in the appropriate section of this document.

**The goal for Part A is to understand the environment.**  To do this you will need to:

* Fetch the code for your project from Azure
* Get it running locally on your computer (i.e., using VS 2022) using the project Run Book as your guide;
* Run the code to make sure you’ve got all the elements needed to run the application; and
* Acquaint yourself with the system and artifacts.

*Note find a copy of the latest runbook for project. If you find that the information you need is missing from your run book, look at one of the other ones for clues. Often the ones that have been developed or maintained recently, have better/more up-to-date instructions.*

* 1. **Identify current state of collateral**

Complete the table below, updating the current state (available/not available, complete/not complete), location (i.e., where in Azure to find artifacts – this should be a link), and any concerns you have with the information so far. Note that some rows may have multiple line items.

|  |  |  |  |
| --- | --- | --- | --- |
| **Artifacts** | **State** | **Location** | **Concerns** |
| Installation/Runbook | Available, not complete | Repos/Documentation/Project Management | The runbook does not provide a way to get a secret key other than to ask the teacher |
| Design Documentation | Available, complete | Repos/Documentation/Project Inception and Design |  |
| Azure Project specific home page[[1]](#footnote-1) | Available, complete | Overview/Summary |  |
| Software (Azure Code/Trunk/branches)[[2]](#footnote-2) | Available, complete | Repos |  |
| Database, Other technical artifacts | Available, not complete | SSMS | The images use a hard coded path and there are no artifacts |
| Azure Work items[[3]](#footnote-3) | Available, complete | Boards/work items |  |

* 1. **Your Setup**
     1. Setup your Azure and Visual Studio to access the latest source code. Start by using the latest branch available**, but make sure you do not check in any changes.**
     2. Each student must have their own database. Use SSMS to login to the SQL Server DB on csdev using **Windows Authentication** to create your own copy. Remember to change the connection string in your local project to point to your **own** database copy. NEVER check in your connection string change into the maintenance release. Leave the maintenance release working from a common database. **For the AMS team it is especially important that you do not make any changes to the main AMS database that is being used by everyone else!**
     3. Make sure that you can run your project.
     4. **Fill in the table below. Put a yes/no indication in the cell for each completed task and ensure that you demonstrate this to the professor before the end of the work period on September 5th.**

|  |  |
| --- | --- |
|  | Completed? |
| Personal copy of source code | Yes |
| Personal copy of database | Yes |
| Verified personal environment, up and running | Yes |
| Demonstrated to professor |  |

* 1. **Answer the following questions for your assigned project:**
     1. Did you get your personal instance of the application up and running smoothly? List any difficulties (technical or interpersonal team dynamics) you ran into. Identify the changes needed to the Run Book for your project that would help this process.
        1. Yes I got it up and running but it was not smooth. Due to not having a secret key we could not log in as a user. Also the data in the database was not good as it was using absolute pathing instead of relative pathing. The run book needs a way to get a secret key in it.
     2. In your own words, what is the system used for? Provide a couple of paragraphs to describe the system and provide an overview of the key requirements for the system.

The main purpose of the system is to provide communication through the union members such as teachers and executives. This is done though the form of posted articles and files. There is also a calendar for event that occur.

The key requirements of the system are the authentication and authorization of the user as not everyone should be able to access the site nor should those who have access to it all have the same permissions. Another key requirement is the ability to post and read articles and to view and add events to the calendar.

## **Initial Understanding of the System (Individual)**

For your response to Part B, rename this document to **YourUserName\_K30\_A01\_PartB.doc** and submit it to Moodle in the appropriate submission folder. Provide the information/ answers in the appropriate section of this document.

**The goal for Part B is to understand the more about the system.** To do this you will need to:

* Understand the application’s purpose and basic functionalities;
* Understand the workflow of the application; and
* Understand the types of users and roles and how they differ.
  1. **Users and roles:**

Using the repository artifacts you found and read through in Part A, identify the user/roles for your system. Identify the test account(s) to use for this role and ensure you can login. Enter this information in the table below. Add rows as necessary.

| User Role | Summarize how they use the system | Test account login | Who shows up as this test user on csdev? | Comments |
| --- | --- | --- | --- | --- |
| Executives | They are a list of people who take executive decisions. They can manage articles, the calendar, page content, the FAQ page, and files | No test Account | No test user | No comment |
| Members | Members of the unions, Aka teachers. They can view and comment on the FAQ page, View member-only documents, view the calendar, and view posts | No test account | No test user | No comment |
| Non-members | Everyone else. Can view articles, view FAQ page, and view about us page | No test account | No test user | No comment |
| Developers | Maintenance team. Can manage release notes | No test account | No test user | No comment |
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* 1. **Workflow and functionality**

Later in the term we will learn about different test methods. One way to gain an initial understanding of a system is to use exploratory testing, where testers interact with the application to explore the application’s functionality in an ad-hoc manner.

For each of the roles, logon and use the application to explore the workflow and functionality.

* + 1. Explain the workflow of the application and its basic functionalities for each role.
       1. Executives
          1. The user logs in, then the user goes to the articles page. From there the user should be able to create, read, update, and delete articles.
          2. The user logs in, the user goes to the calendar page. From there the user should be able to see the calendar and the events, create new events, delete events, and update existing events
          3. The user logs in, the user then goes to the FAQ page. From there the user should be able to see the FAQ, create new FAQ sections, update existing FAQ sections, and delete existing FAQ sections
          4. The user logs in, the user then goes to the files page. From there the user should be able to read existing files
       2. Members
          1. The user logs in, the user goes to the FAQ page. From there the user should be able to see the FAQ and comment on any of the sections
          2. The user logs in, the user then goes to the files page. From there the user should be able to see and read any member only files
          3. The user logs in, the user goes to the calendar page. From there the user should be able to see the calendar and see events on the calendar
          4. The user logs in, the user goes to the articles page. From there the user should be able to see and read any articles that have been posted
       3. Non-members
          1. The user logs in, the user goes to the articles page. From there the user can see articles that have been posted
          2. The user logs in, the user goes to the FAQ page. From there the user should be able to see and read the FAQ sections
          3. The user logs in, the user goes to the about us page. From there the user should be able to see and read the about us page.
       4. Developers
          1. The user logs in, the user goes to the release notes page. From there the user should be able to see and read existing release notes, create new release notes, update existing release notes, and delete existing release notes
    2. Identify any problems you found/ ran into. For each issue, investigate the existing backlog of user stories, tasks, and bugs to see if your issue is already known. Record your findings in the table below. Add rows as needed.

| Issue Description | Login you were using | Known issue?  (enter either yes or no, and if yes, include Azure story, task, or bug ID) | Comments |
| --- | --- | --- | --- |
| Cannot go to the files page | me | Yes, bug 2016 | This is due to us not having access to google sheets |
| Calendar isn’t visible | Me | Yes, US 409 and task 1023 | This is due to us not having access to google sheets |
| Double footer on home page | Me | No |  |
| Home in content hub is empty | Me | No |  |
| Top header on main page but then side header on content hub | Me | No |  |
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## **Deployment and Additional Setup (Individual and Group)**

For your response to Part C, rename this document to **YourUserName\_K30\_A01\_PartC.doc** and submit it to Moodle in the appropriate submission folder. Provide the information/answers in the appropriate section of this document.

* 1. **Azure Homepage/Readme (Individual)**

All CS projects must include an Azure home page with a README that provides context such as:

* What is It?
* Documentation – pointer/link to where the doc is located and how to find out more
* History & Milestones – i.e., when developed, put into production, and other relevant milestones.

[Microsoft Reference](https://docs.microsoft.com/en-us/azure/devops/repos/git/create-a-readme?view=tfs-2018) and [sample](https://github.com/apache/tomcat).

Ramp up on README best practices and identify any updates required for your project README file. List them here:

The README is complete and does not need to be updated

* 1. **Azure Project Documentation (Individual)**

Consider if all the necessary documentation is in Azure or if important information appears to be missing. Identify any additional documentation to add to your repository for the next maintenance cycle. List it here:

The runbook needs to be updated as following it did not work.

* 1. **Versioning (Individual)**

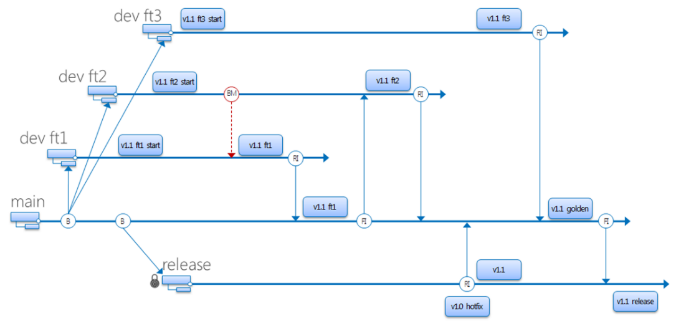
All projects in this maintenance course will need to upgrade their project version to the next major version following the [Microsoft Versioning standards.](https://docs.microsoft.com/en-us/javascript/api/sp-core-library/version?view=sp-typescript-latest)

* Find where the version of the project is located, both in the code and on the homepage or navigation menu (if the version is shown to the user).
* If the version is not shown the user, please identify this as an issue.

Current version (write it, and show a snapshot from your local copy below):

Where in the source code is this done (identify the file name and show relevant code below):

* 1. **Branching and Merging (Group and Individual)**



I suggest that if you need a refresher on Git branching strategies, you go through the following:

[Branch Strategies and Workflow](https://learn.microsoft.com/en-us/training/modules/manage-git-branches-workflows/).

Ramp up on Branching and Merging. **As a team**, create one new branch from the latest/main branch called *Project\_F24\_Dev*. We will use this as the team development branch for the term. Then, each individual should create their own development branch from that branch called …\_username. For example, for me it would be Nursing\_F24\_Dev\_RChan, etc.

Explain your branch strategy and show a snapshot of the branches below:

A black and white drawing of a rectangular object

Description automatically generated

Dev branch based on main branch and should always work. Each user story / feature will have its own branch based on the dev branch and won’t necessarily always work. Each task associated with a user story will have its own branch.

* 1. **Updating your setup (Individual)**

Update your Git and Visual Studio personal setup to access/use the source code from the personal development branch you created in Question 4. Confirm and demonstrate to the professor that this is working before the end of class.

* 1. **Deploy (Group)**

Use the Run Book to deploy the system to csdev. Make sure that you name your system using the following pattern: *Project*\_F2024\_I

Note that all projects on csdev are to be deployed under the /Projects folder – for example, note how the link for the **formal AMS** is: <https://csdev.cegep-heritage.qc.ca/Projects/AMS/>.

Provide a link to your deployed system here:

Make sure you can login and run the deployed system and that it is functioning similar to your local testing.

Record any issues here and note changes required to your Run Book (**be specific since you will need to make these changes later in the term**):

## **Understanding the Backlog (Individual)**

For your response to Part D, rename this document to YourUserName\_K30\_A01\_PartD.doc and submit it to Moodle. Provide the information/ answers in the appropriate section of this document.

The goal for Part D is to identify some critical maintenance work required for the system. To do this you will need to:

* Understand the application’s purpose and basic functionalities;
* Review the existing product backlog;
* Consider any additional issues you found during exploratory testing; and
* Come up with some recommendations for items the class should consider fixing, and why.

Note that the current product backlog has not been groomed, and does not have recent customer feedback, so the new requirements and user priorities are not reflected. Later in the term you will work on backlog grooming as a team, and you will gather requirements from the customer.

* 1. Identify 15 items you believe are important to fix this term. For each issue, identify the type of maintenance (refer to class notes), your assessment of priority, and if you have been able to reproduce or investigate it.

| Description of item | User roles involved | Known issue?  (enter either yes or no, and if yes include Azure story or bug ID) | Your assessment of priority and why | Able to reproduce?  (enter either yes or no, and if yes note how) | Maint. Type |
| --- | --- | --- | --- | --- | --- |
| Show calendar | Executives and members | Yes 1023 | Priority 1 because it seems to be one of the main requirements of the system | Yes. There is just no calendar | adaptive |
| Make website French by default | everyone | Yes 2148 | Priority 1 because I think this has to do with legality | Yes, it is English by default | Adaptive |
| All hardcoded text must have a French translation | everyone | Yes 2147 | Priority 1 because of new Quebec laws | Yes, | adaptive |
| Anyone with a heritage college account can log in | everyone | Yes 577 | Priority 1 because it bypasses A and A | Yes, login with heritage account | Corrective |
| Content hub translation | everyone | Yes 2024 | Priority 1 because of new Quebec laws | Yes, when you are on the content hub in French not everything is translated | corrective |
| Images do not have an accurate alt tag | everyone | Yes 2017 | Priority 2 because it does not follow WAS | Yes, the alt tags are not accurate | corrective |
| Going to an invalid page does not show 404 error page | everyone | Yes 1940 | 3 because this shouldn’t happen often | Yes by going to a page that does not exist | corrective |
| Switching language always brings to home page | everyone | Yes 157 | 3 because it is disruptive but not catastrophic | Yes by switching languages | corrective |
| Cannot go to files page | everyone | Yes 2016 | 2 because it is a big part of the system | Yes by trying to go to the files page | Corrective / adaptive |
| You can access unpublished articles by entering the URL directly | everyone | Yes 2015 | 1 because it bypasses Auth and Authorization | No | Corrective |
| Home page calendar events do not appear | Executives and members | Yes 1729 | 2 because it is a large feature of the system that does not work | Yes there is no calendar events on the home page | Corrective |
| App id displayed on login error | everyone | Yes 1722 | 2 because it is a security risk | Yes by intentionally getting a login error | Corrective |
| Email and name fields in contact us form | everyone | Yes 1705 | 3 because it is useless but not harmful | Yes by going to the contact us page | Corrective |
| Viewing files page as non member breaks the page | Non member | Yes 1771 | 1 because it crashes the app | Yes by going to the files page as a non member | Corrective |
| Upcoming event section of the home page displays inaccurate events | Executives and members | Yes 1545 | 2 because whats the point of having it there if it doesn’t work | no | corrective |

**Marking Scheme**

|  |  |
| --- | --- |
| **Questions** | **Mark** |
| Part A Locally Install and Discover the System |  |
| 1. Identify current state of collateral | 5 |
| 2. Your Setup | 5 |
| 3. Questions i and ii | 2 |
| Part B -Initial Understanding of the System |  |
| 1. Users and roles | 5 |
| 2. Explain workflow for each role | 5 |
| 3. Issues | 5 |
| Part C - Deployment and Additional Setup |  |
| 1. Readme status/updates | 1 |
| 2. Azure project documentation | 1 |
| 3. Versioning | 2 |
| 4. Branching and merging | 2 |
| 5. Updating your Setup | 2 |
| 6. Deploy | 5 |
| Part D - Understanding the Backlog |  |
| 1. items to fix | 10 |
|  |  |
| **Total** | **50** |

1. Consider: Any updates required? Readme and other info completed? [↑](#footnote-ref-1)
2. Consider: What’s in the trunk vs the branches. Where is the current production/latest version published from? Which trunk/branch will you be working on? [↑](#footnote-ref-2)
3. Consider the condition of the Azure work items? Any stale or untrustworthy item (user stories, bugs, tasks)? Are all past milestones clean without lingering open items? [↑](#footnote-ref-3)