

Florida International University
Knight Foundation School of Computing and Information Sciences

Software Engineering Focus

Final Deliverable

Project Title: Manage STARS Tutoring Group Registration Requests

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Abstract

This document presents the information necessary to gain a good understanding of our web application for STARS Tutoring. Throughout reading this document you will find information walking the reader through the steps taken in order to create this web application.

Table of Contents

INTRODUCTION

CURRENT SYSTEM	5
PURPOSE OF NEW SYSTEM	5

USER STORIES

IMPLEMENTED USER STORIES	6
PENDING USER STORIES	6

PROJECT PLAN

HARDWARE AND SOFTWARE RESOURCES	8
SPRINTS PLAN	9
<i>Sprint 1</i>	9
<i>Sprint 2</i>	10
<i>Sprint 3</i>	11
<i>Sprint 4</i>	12
<i>Sprint 5</i>	13
<i>Sprint 6</i>	14
<i>Sprint 7</i>	14

SYSTEM DESIGN

WORKSHEET SCHEMA	15
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APPENDIX

APPENDIX A - POWER PLATFORM DIAGRAMS	18
APPENDIX B - USER INTERFACE DESIGN	21
APPENDIX C - SPRINT REVIEW REPORTS	24
APPENDIX D - USER MANUALS, INSTALLATION/MAINTENANCE DOCUMENT, SHORTCOMINGS/WISHLIST DOCUMENT...	26

REFERENCES

INTRODUCTION

Current System

In the current setup of the STARS Tutoring Group, significant manual effort is required by Dr. P. McDermott-Wells at the beginning of each semester to establish and maintain tutor groups via WhatsApp, a process that includes both the creation of groups and the ongoing approval of up to 150 student registrations per semester. This labor-intensive method not only limits scalability but also detracts from the potential educational focus of the tutoring sessions. With the anticipated increase in demand following the introduction of AI-enhanced tutoring, there is a critical need for a streamlined, automated system that can handle the setup, tutor assignment, and student registration processes more efficiently.

Purpose of New System

The design of the system for automating STARS Tutoring Group registrations focuses on leveraging Microsoft Power Automate and Power Apps to establish an automated, scalable architecture. Critical workflows will be automated, including the creation of tutoring groups, assignment of tutors, and student registrations, all triggered by predefined events like semester starts or course enrollments. The system will feature a user-friendly application interface for both students and tutors, facilitating easy interactions and self-service capabilities. The design will also accommodate future needs, such as potential integration with AI-enhanced tutoring and a migration from WhatsApp to Microsoft Teams, ensuring flexibility and minimal disruption. This system design is crafted to enhance administrative efficiency and improve user experience.

The goal of this project is to automate the setup and management of tutoring groups for the STARS program using Microsoft Power Automate and Power Apps, reducing the manual effort involved significantly. This system will streamline the creation of tutoring groups, assignment of tutors, and student registrations, with triggers set for the beginning of semesters and course enrollments. It features a secure, user-friendly interface that integrates with Microsoft 365 Office Suite and plans for a future transition from WhatsApp to Microsoft Teams. This automation aims to enhance efficiency, ensure data security, and improve the educational support provided to students.

Requirements:

- Automation of Group Setup
- Tutor Assignment Automation
- Student Registration Automation
- Integration with Microsoft Tools
- Scalability (over 200 students)
- Data Security and Privacy
- End-of-Semester Reporting

- User-Friendly Interface

USER STORIES

The following section provides the detailed user stories that were implemented in this iteration of the project. These user stories served as the basis for the implementation of the project's features. This section also shows the user stories that are to be considered for future development..

Implemented User Stories

- User Story 1: Register and attend Microsoft Power and Automation Training
- User Story 2: Automating the creation of Course Channels for STARS
- User Story 3: Automating the Student Registration for Tutoring Services
- User Story 4: Automating Tutor notes after tutoring sessions
- User Story 5: Generating Reports and Statistics
- User Story 6: Automating the Approval of Student Requests for Courses
- User Story 7: User Interface Model for App
- User Story 8: Application Documentation
- User Story 9: Project Posters

Pending User Stories

- User Story 10: Project Presentation
- User Story 11: Project Information & Documentation
- User Story 12: Project Showcase
- User Story 13: Final Deliverable

PROJECT PLAN

Define Project Scope and Objectives:

- Clearly outline the goals and objectives of the project, including the automation of course setup, tutor assignment, student registration, and end-of-semester reporting.

Identify Stakeholders:

- Identify all stakeholders involved in the tutoring process, including administrators, tutors, and students.

Gather Requirements:

- Collaborate with stakeholders to gather detailed requirements for each component of the project, including course setup, tutor assignment, student registration, and reporting.

Analyze Current Processes:

- Analyze the current manual processes involved in setting up courses, assigning tutors, registering students, and generating reports. Identify pain points and inefficiencies.

Design Automation Workflows:

- Design automated workflows using Microsoft Power Automate to streamline the setup of tutoring groups in WhatsApp, assign tutors to courses, and manage student registrations.

Develop Power Apps for Registration:

- Develop Power Apps to facilitate the registration process for students seeking tutoring. Design the app interface to be user-friendly and intuitive.

Integration with Microsoft Teams:

- Consider future integration with Microsoft Teams channels and ensure that the automation workflows can easily transition to Teams when required.

Data Flow and Integration:

- Define the data flow between different components of the system, ensuring seamless integration between Power Automate, Power Apps, WhatsApp, and potentially Microsoft Teams.

Testing and Quality Assurance:

- Test the automated workflows and Power Apps thoroughly to identify and resolve any bugs or issues. Conduct user acceptance testing to ensure that the system meets the needs of all stakeholders.

Training and Documentation:

- Provide training sessions for administrators, tutors, and students on how to use the automated system effectively. Create comprehensive documentation to support users in case of any queries or issues.

Deployment:

- Deploy the automated system in production, ensuring that all necessary configurations are in place for smooth operation.

Monitoring and Maintenance:

- Monitor the performance of the automated system and provide ongoing maintenance and support as needed. Continuously gather feedback from users to identify areas for improvement.

Hardware and Software Resources

The following is a list of all hardware and software resources that were used in this project:

- Microsoft Power Automate/Power Apps
- Microsoft 365 Office Suite with an E3-level
- WhatsApp
- Microsoft Teams portal

Sprints Plan

Sprint 1

What We've Done:

- **Planning:** We started by figuring out what we needed to do for the STARS tutor group management system. We decided to focus on a few main goals:
- **Making WhatsApp Groups Easily:** We want tutors and students to talk to each other easily.
- **Making Signing Up for Tutoring Simple:** Students should find it easy to sign up for help.
- **Helping Tutors with Notes:** We are making it simpler for tutors to keep track of their sessions.
- **Creating Reports Quickly:** We aim to automatically make reports that show how the tutoring is going.
- **Daily Check-ins:** Every day, we talk about what everyone has done, what we will do next, and if there are any problems. This helps us stay on track and solve issues quickly.
- **Learning and Building:** A big part of our work has been learning how to use Microsoft Power Apps and Automate. **This means:**
- **Going to Workshops:** We have been learning more about how to use these tools.
- **Practicing:** We have been trying out what we have learned by making parts of our app.
- **Working Together on Problems:** When we run into problems, we talk about them together and produce solutions. This teamwork helps us move forward.

Challenges We Faced:

- **Learning New Tech:** It took some time to get good at using Microsoft Power Apps and Automate. We learned a lot by practicing and helping each other.
- **Making the App Better:** We want our app to be easy to use and helpful. To do this, we keep looking for ways to improve how it works and looks.
- **Staying Coordinated:** It is important that we all work well together. Our daily talks and planning help us make sure everyone knows what to do.

What's Next:

- We are going to keep making the app better, focusing on making it easy for users and adding new features. We will use what we have learned to make sure our app does what it needs to do for students and tutors.

Conclusion:

- We are working hard on making a system that helps tutors and students connect better. By learning new tools and working closely together, we are making timely progress. We are excited to keep improving our project and make tutoring easier and more organized for everyone.

Sprint 2**What We've Done:**

- **Focused on Making Things Look Good:** We talked about how to make our app easy and nice to look at. This means choosing colors, buttons, and how things show up on the screen.
- **Made Joining Groups Easier:** We worked on a way to let students join WhatsApp or Microsoft Teams groups for their courses without any hassle.
- **Streamlined Signing Up for Tutoring:** We continued improving how students sign up for tutoring, aiming to make it super simple for them.
- **Approval of Course Requests:** We made sure that when students ask to join a course, someone checks and approves it quickly, so everything runs smoothly.
- **Keeping Track of Tutor Notes:** We explored using Microsoft Teams to help tutors keep notes more efficiently, which could later help us understand what students need help with the most.
- **Reports and Stats:** We started creating a part of the app that will help us see how everything is going, like how many students are getting tutoring and if it is helping.

Challenges We Faced:

- **Deciding Between WhatsApp and Teams:** We spent a lot of time figuring out whether to use WhatsApp or Microsoft Teams for our groups. This involved a lot of research and testing.
- **Making Everything Work Together:** We worked on connecting all parts of our project, like making sure students who sign up get added to the right groups.
- **Learning New Things:** There was a lot to learn about Microsoft Power Automate and Power Apps to make our ideas work.

What's Next:

- We will keep improving the look and feel of the app, making sure it is easy for everyone to use. We will finish any parts that are not working perfectly yet and test everything to make sure it all works together well.

Conclusion:

- In Sprint 2, we really dug into the details of our project, making everything from signing up for tutoring to joining study groups easier and more automated. We ran into some tough decisions and had a lot to learn, but we are making great progress and are excited to see it all come together.

Sprint 3

What We've Done:

- **Strategic Planning:** Established priorities, including automating course channels, student registration, and approval processes, enhancing tutor notes, and generating reports and statistics.
- **Automation and Integration:** Made noteworthy progress in automating key functionalities and integrating Microsoft Teams for course management and communication.
- **UI/UX Development:** Focused on creating a user-friendly interface, facilitating easier navigation and interaction for users.
- **Documentation and Testing:** Initiated the development of comprehensive documentation and commenced testing phases to ensure system efficiency and effectiveness.
- **Educational Advancement:** Team members continued to enhance their skills in PowerApps and Power Automate, essential for improving app functionality and workflow.

Challenges We Faced:

- **Technical Constraints:** Encountered limitations with WhatsApp Connector, prompting a shift towards Microsoft Teams and necessitating alternative solutions.
- **Complex Integration:** Managed the intricacies of integrating various app components for seamless functionality.
- **Licensing Issues:** Some team members faced challenges with software licensing, impacting development and testing.

Planning and Execution Insights:

- Set an ambitious goal for the sprint, focusing on critical user stories, and collectively working towards their completion, while addressing concerns like WhatsApp Connector limitations and permission issues.

Review and Retrospective Outcomes:

- Achieved expected team velocity and efficiently completed tasks, with positive feedback from the product owner. The retrospective highlighted the need for ongoing hard work, research, and collaborative improvement efforts.
- The review meeting revealed that while progress was made, some user stories required further refinement and were moved back to the backlog, indicating a continuous evolution in project focus and execution strategies.

Next Steps:

- Finalizing automation processes, refining the user interface for enhanced usability, and conducting comprehensive testing to ensure smooth operation.

Conclusion:

- Sprint 3 shows progress in developing the STARS tutor group management system, with advances in automation, research, and design. The team faced technical challenges but remained focused on delivering a user-friendly and effective application. The emphasis on testing, feedback, and iterative improvement underscored the sprint's success and laid the foundation for future advancements.

Sprint 4**What We've Done:**

- **Development of PowerApps:** Advanced in creating a PowerApp with dashboards to display critical business information and buttons triggering PowerAutomate flows, enhancing functionality and user interaction.
- **Workflow Automation:** Continued development on automating the process for tutors to submit session notes, aiming to streamline administrative tasks.
- **Dashboard Exploration:** Worked on conceptualizing and implementing a dashboard feature to allow users to select different classes and groups, catering to both tutors and students.
- **Exhibition Planning:** Deliberated on the best approach to present the project to a general audience, weighing the benefits of technical showcase versus business pitch orientations.
- **Planning and Grooming:** Focused on breaking down large user stories into smaller tasks, ensuring they meet the team's definition of ready, and prioritizing them for development.

Challenges We Faced:

- No significant hurdles were reported during this sprint, indicating a smooth progression in the development and planning processes.

Progress in Meetings:

- In the planning meeting, priority was given to automating course channel creation, student registration, and approval processes, along with developing the user interface and documentation.
- Backlog grooming helped refine these user stories, ensuring a clear path forward for the sprint's goals.
- The retrospective meeting highlighted the team's efficient work and confirmed that the tasks for each user story were completed successfully, with positive feedback received from the product owner.

Review and Future Direction:

- The review meeting indicated that while substantial progress was made, some user stories needed further refinement and were moved back to the backlog, especially those involving course group automation in Teams and report generation.
- The team plans to continue improving the PowerApp development, refining the automated workflows, and enhancing the overall user experience of the tutoring management system.

Conclusion:

- Sprint 4 demonstrated effective advancement in the STARS tutor group management system development, with significant contributions to PowerApps creation, workflow automation, and planning for future presentations. The team managed to navigate the sprint without major obstacles, highlighting their ability to address complex tasks efficiently and prepare for the next stages of the project.

Sprint 5**What We've Done:**

- **Page Layout Development:** Concentrated on the design and refinement of "Tutor Survey," "Manage Requests," and "Start Semester" pages, ensuring user-friendly and functional interfaces.
- **Documentation Enhancement:** Compiled and reviewed previous meeting notes and standups to create detailed documentation, providing a clear overview of project progress.
- **Backlog Grooming:** Conducted a thorough grooming session to break down user stories into smaller tasks, clarify any ambiguities, and prepare for upcoming sprints.

Challenges We Faced:

- The team successfully navigated through the sprint without encountering significant obstacles, highlighting effective project management and teamwork.

Daily Standup Insights:

- Regular standups focused on continuous improvement of application features, emphasizing user interface enhancements and backend integrations.
- Specific attention was given to the "Start Semester" page, aiming to finalize navigation elements and integrate them with PowerAutomate flows for operational efficiency.

Next Steps:

- Continue to refine the application's features, with a focus on completing the "Start Semester" page and ensuring all functionalities are fully integrated and operational.
- Finalize comprehensive documentation to reflect the project's scope, progress, and future direction accurately.

Conclusion:

- Sprint 5 saw the STARS tutor group management system making steady progress with significant developments in user interface design, backend integration, and project documentation. The absence of major challenges indicates the team's effective planning and execution. As the project moves forward, the focus will remain on refining the application's features and preparing for the final stages of development.

Sprint 6**What We've Done:**

- The team focused on refining the user interface and enhancing the functionality of the app, including creating a welcoming and intuitive layout for new users.
- We continued to develop robust features such as the "Start Semester" page, which now includes options to append semester details and prepare for new cycles with an "End Semester" page.
- Documentation efforts were bolstered to capture all modifications and planning for future additions, ensuring comprehensive user guides and a system for ongoing updates.

Challenges We Faced:

- The sprint proceeded smoothly without significant obstacles, reflecting effective prior planning and coordination among the team members.

Daily Standup Insights:

- Daily tasks included adjustments to the user interface to enhance navigation, integration of backend functionalities with the frontend to ensure seamless user experiences, and preparations for final project presentations.
- Team members were dedicated to perfecting the system's usability and preparing informative materials such as posters and videos for project showcases.

Backlog Grooming and Review:

- The backlog grooming session focused on detailing user stories for completeness and readiness for upcoming sprints.
- During the review, user stories regarding course channel creation, student registration automation, and interface enhancements were approved, while others, like tutor notes automation, required further improvements.

Conclusion:

- Sprint 6 has shown considerable progress in enhancing the app's interface and user engagement features. The team effectively handled the project documentation and prepared educational resources to aid future users and developers. With solid groundwork laid for user interaction and system documentation, the project is well-poised for final evaluations and subsequent implementation stages.

SYSTEM DESIGN

The STARS System is designed to be user- friendly, allowing students to easily submit their requests with their name and FIU email address, while tutors can view and respond to these requests efficiently. An Excel spreadsheet is used to store all relevant information about the students and the classes they need help with, ensuring students' sensitive information is protected. The system also includes a feature for users to rate or give feedback on the help they received, emphasizing the importance of quality service and help.

Request Table

Final Deliverable

STARS Tutoring Group Management

RECORD_ID	SURVEY_ID	PANTHER_ID	LAST_NAME	FIRST_NAME	EMAIL	COURSE	REQUEST_DATE
28	55	1000028	Wilson	Woodrow	cslay001@fiu.edu	COP 3337 - Computer Programming II	4/12/2024
29	55	1000028	Wilson	Woodrow	cslay001@fiu.edu	COP 3835 - Designing Web Pages	4/12/2024
30	56	1000030	Coolidge	Calvin	cslay001@fiu.edu	CAP 4104 - Human Computer Interaction	4/12/2024
31	56	1000030	Coolidge	Calvin	cslay001@fiu.edu	CAP 4630 - Artificial Intelligence	4/12/2024
32	56	1000030	Coolidge	Calvin	cslay001@fiu.edu	CGS 2518 - Computer Data Analysis	4/12/2024
33	56	1000030	Coolidge	Calvin	cslay001@fiu.edu	CGS 4285 - Appl Networking	4/12/2024
34	57	1000032	Roosevelt	Franklin	cslay001@fiu.edu	CEN 3721 - Introduction to Human-Computer Interaction	4/12/2024
35	57	1000032	Roosevelt	Franklin	cslay001@fiu.edu	CGS 3767 - Computer Operating Systems	4/12/2024
36	57	1000032	Roosevelt	Franklin	cslay001@fiu.edu	CIS 4203 - Digital Forensics	4/12/2024
37	57	1000032	Roosevelt	Franklin	cslay001@fiu.edu	COP 4005 - Windows Programming	4/12/2024
39	60	1000034	Eisenhower	Dwight	cslay001@fiu.edu	CEN 3721 - Introduction to Human-Computer Interaction	4/12/2024
40	60	1000034	Eisenhower	Dwight	cslay001@fiu.edu	CIS 4365 - Enterprise Cybersecurity Policies and Practices	4/12/2024
41	63	6099816	Slayton	Corey	cslay001@fiu.edu	CAP 4104 - Human Computer Interaction	4/13/2024
42	63	6099816	Slayton	Corey	cslay001@fiu.edu	CAP 4770 - Introduction to Data Mining	4/13/2024
43	63	6099816	Slayton	Corey	cslay001@fiu.edu	CEN 3721 - Introduction to Human-Computer Interaction	4/13/2024
44	63	6099816	Slayton	Corey	cslay001@fiu.edu	CGS 2100 - Intro to Microcomputer Applications for Business	4/13/2024

Approval Table

RECORD_ID	PANTHER_ID	FIRST_NAME	LAST_NAME	EMAIL	COURSE	REQUEST_DATE	APPROVE_DATE
1	1000001	George	Washington	cslay001@fiu.edu	CAP 4104 - HCI for CS	3/26/2024	4/12/2024
2	1000001	George	Washington	cslay001@fiu.edu	CAP 4506 - Intro to Game Theory	3/26/2024	4/12/2024
3	1000002	John	Adams	cslay001@fiu.edu	CAP 4104 - HCI for CS	3/26/2024	4/12/2024
4	1000002	John	Adams	cslay001@fiu.edu	CEN 3721 - Human-Computer Interaction	3/26/2024	4/12/2024
5	1000003	Thomas	Jefferson	cslay001@fiu.edu	CAP 4104 - HCI for CS	3/26/2024	4/12/2024
6	1000003	Thomas	Jefferson	cslay001@fiu.edu	CIS 4365 - Enterprise Security	3/26/2024	4/12/2024
7	1000003	Thomas	Jefferson	cslay001@fiu.edu	CIS 4431 - IT Automation	3/26/2024	4/12/2024
9	1000005	James	Monroe	cslay001@fiu.edu	COP 4710 - Database	3/26/2024	4/12/2024
11	1000007	Andrew	Jackson	cslay001@fiu.edu	CAP 4630 - Artificial Intelligence	3/26/2024	4/12/2024
13	1000016	Abraham	Lincoln	cslay001@fiu.edu	CAP 4630 - Artificial Intelligence	3/26/2024	4/12/2024
14	1000016	Abraham	Lincoln	cslay001@fiu.edu	CAP 4104 - Human Computer Interaction	3/26/2024	4/12/2024
17	1000018	Ulysses	Grant	cslay001@fiu.edu	CIS 4731 - Fundamentals of Blockchain Technologies	4/12/2024	4/12/2024
18	1000018	Ulysses	Grant	cslay001@fiu.edu	COP 2210 - Programming I	4/12/2024	4/12/2024
20	1000018	Ulysses	Grant	cslay001@fiu.edu	COP 4710 - Database Management	4/12/2024	4/12/2024
22	1000020	Grover	Cleveland	cslay001@fiu.edu	COP 2210 - Programming I	4/12/2024	4/12/2024
25	1000028	Woodrow	Wilson	cslay001@fiu.edu	CAP 4770 - Introduction to Data Mining	4/12/2024	4/12/2024
26	1000028	Woodrow	Wilson	cslay001@fiu.edu	CEN 4010 - Software Engineering I	4/12/2024	4/12/2024
43	1234567	Raekiah	Hosin	rhosi003@fiu.edu	CAP 4770 - Introduction to Data Mining	4/12/2024	4/12/2024
46	626383	Mitchelle	Chinyani	mchus@fiu.edu	CAP 4104 - Human Computer Interaction	4/12/2024	4/12/2024
48	626383	Mitchelle	Chinyani	mchus@fiu.edu	CDA 3102 - Computer Architecture	4/12/2024	4/12/2024
38	1000034	Dwight	Eisenhower	cslay001@fiu.edu	CAP 4104 - Human Computer Interaction	4/12/2024	4/13/2024
45	1234567	Raekiah	Hosin	rhosi003@fiu.edu	CDA 3102 - Computer Architecture	4/12/2024	4/13/2024

Denials Table

RECORD_ID	PANTHER_ID	FIRST_NAME	LAST_NAME	EMAIL	COURSE	REQUEST_DATE	DENY_DATE
8	1000004	James	Madison	cslay001@fiu.edu	COP 4005 - Windows Programming for IT	3/26/2024	4/12/2024
10	1000007	Andrew	Jackson	cslay001@fiu.edu	CAP 4104 - Human Computer Interaction	3/26/2024	4/12/2024
12	1000016	Abraham	Lincoln	cslay001@fiu.edu	CAP 4104 - HCI for CS	3/26/2024	4/12/2024
15	1000026	Theodore	Roosevelt	cslay001@fiu.edu	CTS 4348 - Unix Administration	3/26/2024	4/12/2024
16	1000026	Theodore	Roosevelt	cslay001@fiu.edu	CTS 4408 - Database Administration	3/26/2024	4/12/2024
19	1000018	Ulysses	Grant	cslay001@fiu.edu	COP 4226 - Advanced Windows Programming	4/12/2024	4/12/2024
21	1000020	Grover	Cleveland	cslay001@fiu.edu	CIS 4431 - IT Automation	4/12/2024	4/12/2024
23	1000020	Grover	Cleveland	cslay001@fiu.edu	COP 4604 - Advanced Unix Programming	4/12/2024	4/12/2024
24	1000020	Grover	Cleveland	cslay001@fiu.edu	COP 4813 - Web Application Programming	4/12/2024	4/12/2024
42	1234567	Raekiah	Hosin	rhosi003@fiu.edu	CAP 4104 - Human Computer Interaction	4/12/2024	4/12/2024
44	1234567	Raekiah	Hosin	rhosi003@fiu.edu	CEN 4010 - Software Engineering I	4/12/2024	4/12/2024
47	626383	Mitchelle	Chinyani	mchus@fiu.edu	CAP 4770 - Introduction to Data Mining	4/12/2024	4/12/2024
49	626383	Mitchelle	Chinyani	mchus@fiu.edu	CEN 4021 - Software Engineering II	4/12/2024	4/12/2024
41	1000034	Dwight	Eisenhower	cslay001@fiu.edu	COP 2210 - Programming I	4/12/2024	4/13/2024
27	1000028	Woodrow	Wilson	cslay001@fiu.edu	CIS 4203 - Digital Forensics	4/12/2024	4/13/2024

Course Table

Course	Active
CAP 4104 - HCI for CS	Yes
CAP 4506 - Intro to Game Theory	Yes
CAP 4612 - Intro to Machine Learning	Yes
CAP 4630 - Artificial Intelligence	Yes
CAP 4770 - Intro to Data Mining	No
CDA 3102 - Computer Design Architecture	Yes
CEN 3721 - Human-Computer Interaction	No
CEN 4010 - Software Engineering 1	No
CEN 4021 - Software Engineering 2	No
CEN 4072 - Fundamentals of Software Testing	No
CGS 1540 - Intro to Database	No
CGS 2060 - Intro to Microcomputers	No
CGS 2100 - Microcomputer Apps for Business	No
CGS 2518 - Computer Data Analysis	No
CGS 3767 - Computer Operating Systems	No
CGS 4285 - Applied Computer Networking	No
CGS 4854 - Website Construction Mgmt	No
CIS 4203 - Digital Forensics	No
CIS 4365 - Enterprise Security	No
CIS 4431 - IT Automation	No
CIS 4731 - Intro to Blockchain	No
CNT 4403 - Intro to Computer Security	No
CNT 4513 - Data Communications	No
COP 2210 OR COP 2250 - 1st Java course	No
COP 3337 OR COP 3804 - 2nd Java course	No
COP 3530 - Data Structures	No
COP 3835 - Designing Web Pages	No
COP 4005 - Windows Programming for IT	No
COP 4226 - Advanced Windows Programming	No
COP 4338 - Systems Programming	No
COP 4534 - Algorithm Techniques	No
COP 4555 - Principles of Programming Languages	No
COP 4604 - Advanced Unix Programming	No
COP 4610 - OS principles	No
COP 4703 - Info Storage	No
COP 4710 - Database	No
COP 4813 - Web Application Programming	No
COP 4814 - Component-Based SW Development	No
COT 3100 - Discrete Structures	No
COT 3510 - Applied Linear Structures	No
COT 3541 - Logic	No

APPENDIX

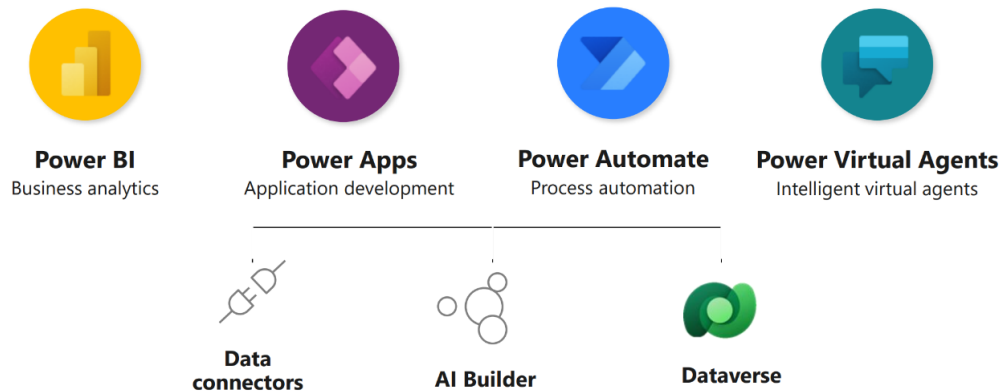
Appendix A - PowerPlatform Diagrams

Microsoft | Power Platform

Microsoft Power Platform

The low-code platform that spans Office 365, Azure, Dynamics 365, and standalone applications

Innovation anywhere. Unlocks value everywhere.

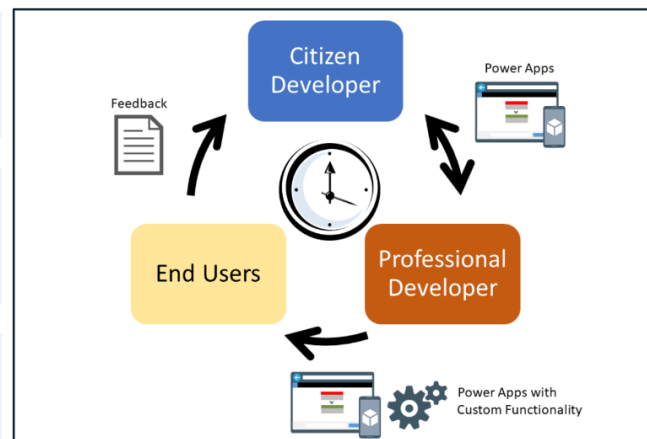


The business value of Microsoft Power Platform

Easily adapt to changing workforce expectations by delivering custom, collaborative, digital experiences

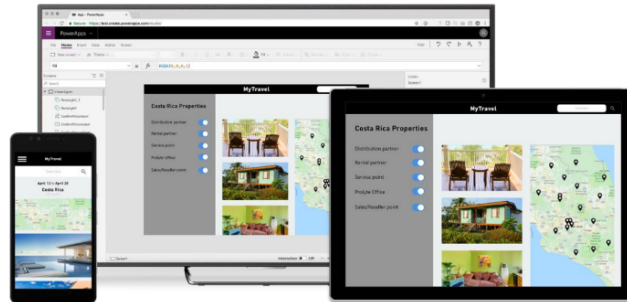
Become more agile by quickly building solutions based on your organizations rapidly changing needs

Reduce extra costs associated with custom applications by leveraging low code/now code tools



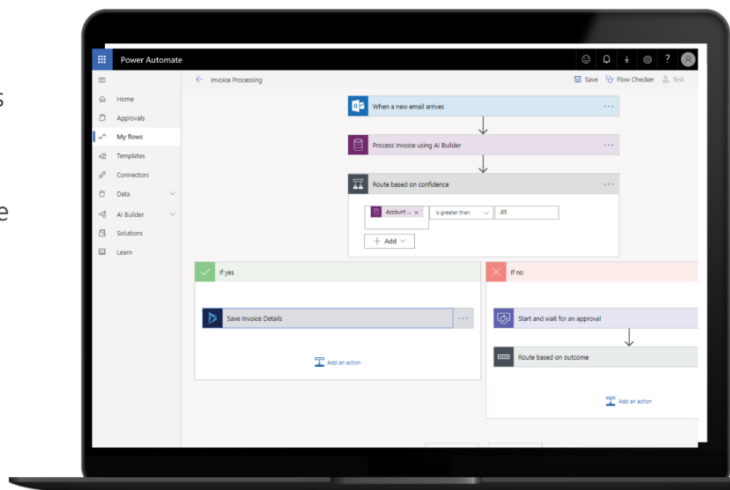
Build and consume solutions for web and mobile with Power Apps

- Build highly customized task- and role-based canvas apps with data from one or multiple sources
- Generate immersive model-driven apps, starting from your data model and business processes
- Consume fully accessible apps across web and mobile, embedded or standalone, on any device



Automate and integrate business processes with Power Automate

- Automate and model business processes across your apps and services
- From simple automations to advanced scenarios with branches, loops, and more
- Trigger actions, grant approvals, and get notifications right where you work
- Automate legacy, on-prem and cloud-based applications and services

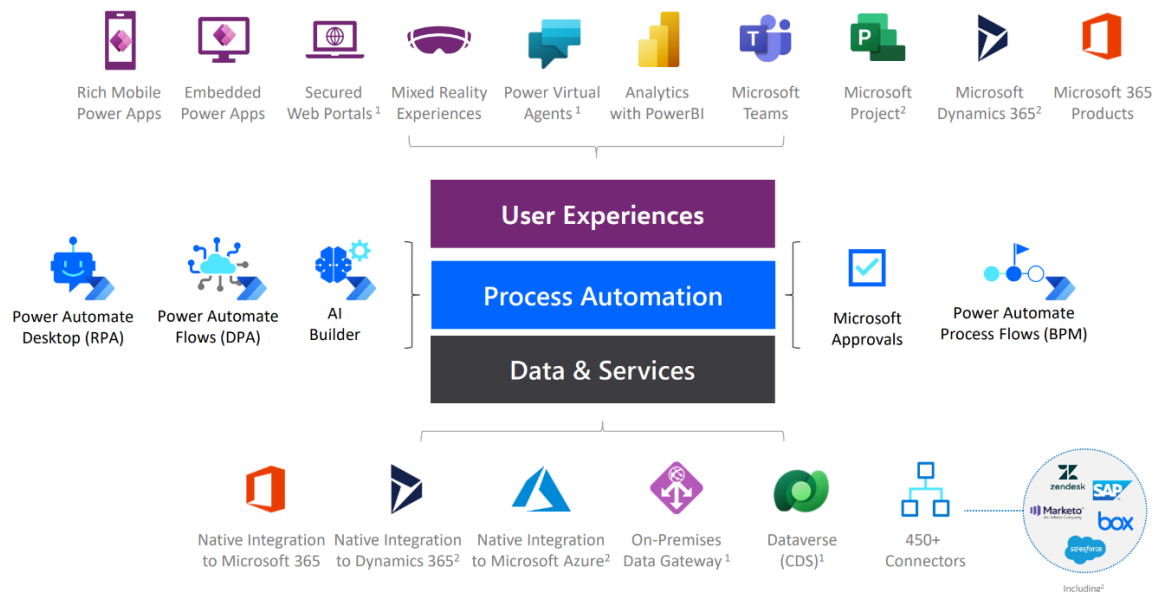


Data Connectors

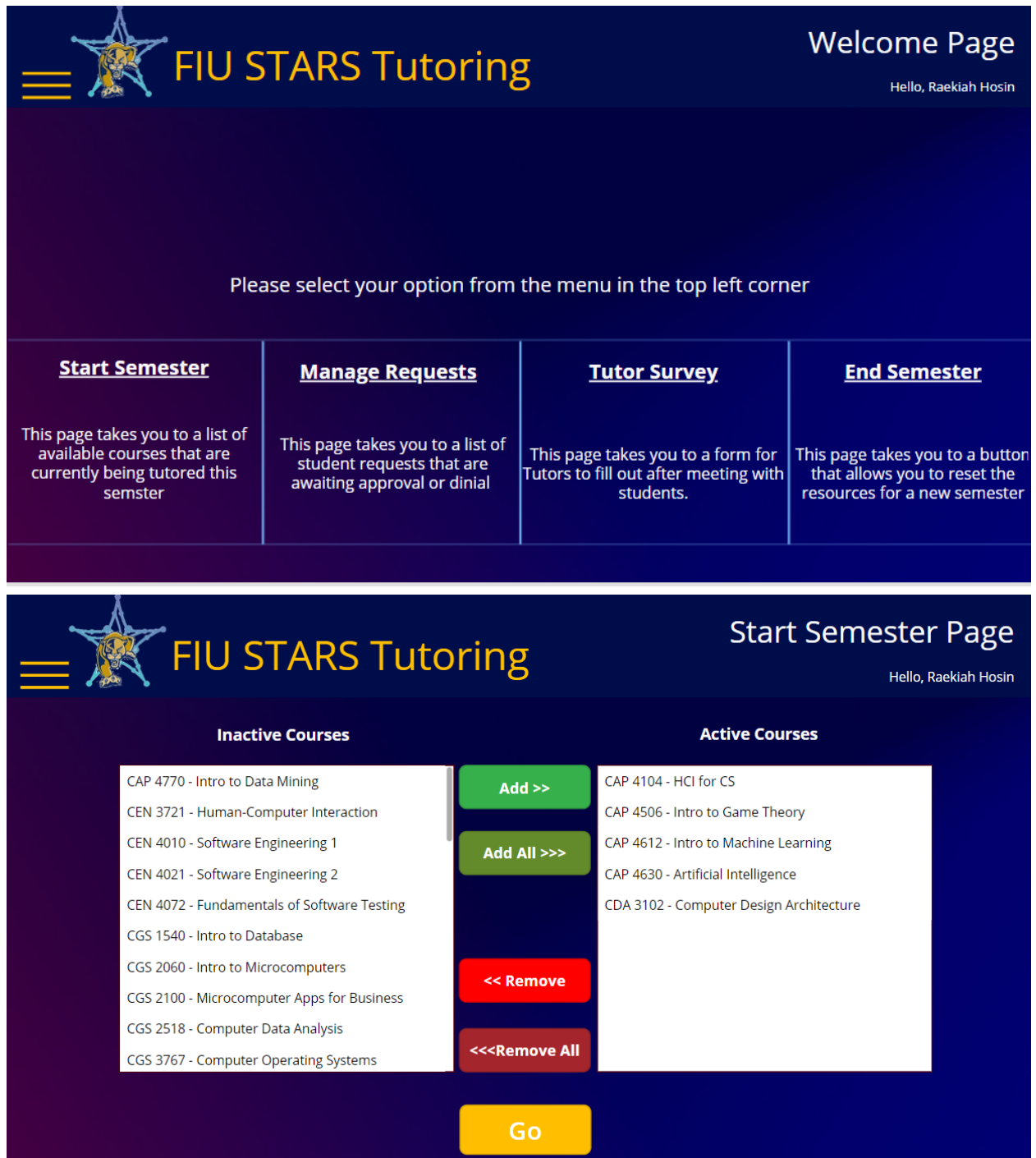


- Connectors are available for use in multiple products:
 - Power Automate 
 - Power Apps 
 - Logic Apps 
- Custom connectors
 - An advantage of building custom connectors is that they can be used in different platforms, such as Power Apps, Power Automate, and Azure Logic Apps.
 - It allows you to extend your app by calling a publicly available API, or a custom API you're hosting in a cloud provider, such as Azure.
 - You can create custom connectors using 3 different approaches:
 - Using a blank custom connector
 - From an OpenAPI definition
 - From a Postman collection

The unmatched functional flexibility of the Power Platform



Appendix B - User Interface Design





FIU STARS Tutoring

Manage Requests Page

Hello, Raekiah Hosin

Date/Time	Name/Email	Course Code/Name	Approve/Deny
4/12/2024	Woodrow Wilson cslay001@fiu.edu	COP 3337 - Computer Programming II	Make Selection 
4/12/2024	Woodrow Wilson cslay001@fiu.edu	COP 3835 - Designing Web Pages	Make Selection 
4/12/2024	Calvin Coolidge cslay001@fiu.edu	CAP 4104 - Human Computer Interaction	Approve Deny Make Selection 
4/12/2024	Calvin Coolidge cslay001@fiu.edu	CAP 4630 - Artificial Intelligence	Make Selection 
4/12/2024	Calvin Coolidge cslay001@fiu.edu	CGS 2518 - Computer Data Analysis	Make Selection 
4/12/2024	Calvin Coolidge cslay001@fiu.edu	CGS 4285 - Appl Networking	Make Selection 

Submit



FIU STARS Tutoring

View Denials Page

Hello, Raekiah Hosin

Filter Course 
Course Count: 14
Student Count: 10

PANTHER_ID	FIRST_NAME	LAST_NAME	EMAIL	COURSE	DENY_DATE
626383	Mitchelle	Chinyani	mchus@fiu.edu	CEN 4021 - Software Engineering II	4/12/2024
1000004	James	Madison	cslay001@fiu.edu	COP 4005 - Windows Programming for IT	4/12/2024
1000007	Andrew	Jackson	cslay001@fiu.edu	CAP 4104 - Human Computer Interaction	4/12/2024
1000016	Abraham	Lincoln	cslay001@fiu.edu	CAP 4104 - HCI for CS	4/12/2024
1000018	Ulysses	Grant	cslay001@fiu.edu	COP 4226 - Advanced Windows Programming	4/12/2024
1000020	Grover	Cleveland	cslay001@fiu.edu	CIS 4431 - IT Automation	4/12/2024
1000020	Grover	Cleveland	cslay001@fiu.edu	COP 4604 - Advanced Unix Programming	4/12/2024
1000020	Grover	Cleveland	cslay001@fiu.edu	COP 4813 - Web Application Programming	4/12/2024
1000026	Theodore	Roosevelt	cslay001@fiu.edu	CTS 4348 - Unix Administration	4/12/2024
1000026	Theodore	Roosevelt	cslay001@fiu.edu	CTS 4408 - Database Administration	4/12/2024
1000028	Woodrow	Wilson	cslay001@fiu.edu	CIS 4203 - Digital Forensics	4/13/2024
1000034	Dwight	Eisenhower	cslay001@fiu.edu	COP 2210 - Programming I	4/13/2024
1234567	Raekiah	Hosin	rhosi003@fiu.edu	CAP 4104 - Human Computer Interaction	4/12/2024
1234567	Raekiah	Hosin	rhosi003@fiu.edu	CEN 4010 - Software Engineering I	4/12/2024



FIU STARS Tutoring

View Approvals Page

Hello, Raekiah Hosin

Filter Course

Course Count: 14
Student Count: 12

PANTHER_ID	FIRST_NAME	LAST_NAME	EMAIL	COURSE	APPROVE_DATE
1000001	George	Washington	cslay001@fiu.edu	CAP 4104 - HCI for CS	4/12/2024
1000001	George	Washington	cslay001@fiu.edu	CAP 4506 - Intro to Game Theory	4/12/2024
1000002	John	Adams	cslay001@fiu.edu	CAP 4104 - HCI for CS	4/12/2024
1000002	John	Adams	cslay001@fiu.edu	CEN 3721 - Human-Computer Interaction	4/12/2024
1000003	Thomas	Jefferson	cslay001@fiu.edu	CAP 4104 - HCI for CS	4/12/2024
1000003	Thomas	Jefferson	cslay001@fiu.edu	CIS 4365 - Enterprise Security	4/12/2024
1000003	Thomas	Jefferson	cslay001@fiu.edu	CIS 4431 - IT Automation	4/12/2024
1000005	James	Monroe	cslay001@fiu.edu	COP 4710 - Database	4/12/2024
1000007	Andrew	Jackson	cslay001@fiu.edu	CAP 4630 - Artificial Intelligence	4/12/2024
1000016	Abraham	Lincoln	cslay001@fiu.edu	CAP 4630 - Artificial Intelligence	4/12/2024
1000016	Abraham	Lincoln	cslay001@fiu.edu	CAP 4104 - Human Computer Interaction	4/12/2024
1000018	Ulysses	Grant	cslay001@fiu.edu	CIS 4731 - Fundamentals of Blockchain Techn...	4/12/2024
1000018	Ulysses	Grant	cslay001@fiu.edu	COP 2210 - Programming I	4/12/2024
1000018	Ulysses	Grant	cslay001@fiu.edu	COP 4710 - Database Management	4/12/2024



FIU STARS Tutoring

Student Request Page

Hello, Raekiah Hosin

[Click Here to Complete FIU STARS Student Registration Form](#)

Appendix C - Sprint Review Reports

User Story1: Register and attend Microsoft Power and Automation Training

- Each group member explored the platform through different mediums such as attending official Microsoft training workshops, watching YouTube tutorials, exploring the software itself or through mentors.

User Story2: Automating the creation of WhatsApp Groups for STARS

- Began this story by creating a template Power App. We still need to learn more about all the apps within the Microsoft Power Platform (Apps, Automate, and Dataverse). However, we are creating a User Interface and improving our template off of that. An important aspect of this story is ensuring access to the WhatsApp Connector (premium) provided within the software.

User Story3: Automating the Student Registration for Tutoring Services

- Began this story by working out which application we will use to cross the bridge between Microsoft Power Platform and the automated creation of WhatsApp student and tutor groups.

User Story4: Automating Tutor Notes After Tutoring Session

- Began this story by creating a template Power App with Main landing screen. The Product Owner noted that Tutors would appreciate a separate dashboard screen with options associated with common tasks they perform, like completing post tutoring surveys. We still need to learn more about all the apps within the Microsoft Power Platform (Apps, Automate, and Dataverse). However, we are creating a User Interface and improving our template off of that. An important aspect of this story is receiving stakeholder (tutors) feedback on their process and what their requirements and preferences are.

User Story5: Generating Reports and Statistics

- Began this story by creating a template Power App. A screen specifically for generating reports and statistics will be created. We still need to learn more about all the apps within the Microsoft Power Platform (Apps, Automate, and Dataverse). However, we are creating a User Interface and improving our template off of that. An important aspect of this story is ensuring the Product Owner is okay with using Power BI to generate reports from the spreadsheets. Alternatively we could use visualizations generated by Excel.

User Story6: Automating the Approval of Student Requests for Courses

- This User Story is nearly complete. We currently have a flow that successfully accomplishes the end goals. We will be completing a Manage Requests page on our STARS Application that will display all student requests and allow Admin to approve/reject them.

User Story7: User Interface Model for App

- Team is creating a user interface model to guide our development of the STARS App that will utilize our approved Automate Flows. This will provide a nice aesthetic platform that is easy to use because it guides the user to perform the tasks they want to complete. It will include a Human Computer Interaction analysis to maximize usability.

User Story8: Application Documentation

- We started to create a comprehensive document that explains all of the goals that we have set out so far, which paths have been taken to achieve our goals successfully and what are some decisions that had to be made when we found ourselves stuck or having to take a completely different route than what was initially planned. Additionally we're starting on the user manual documentation so anyone who wants to learn about the app or pick up where we left on can do so with ease.

Appendix D - User Manuals, Installation/Maintenance Document, Shortcomings/Wishlist Document and other documents

Shortcomings:

- Admin or Tutor phone contact information incorrect or unavailable
- Admin or Tutor does not have WhatsApp or Teams
- Fully dependent on Microsoft PowerPlatform
- The current system only allows one collaborator at a time to edit the PowerApp
- Due to PowerApps utilizing Excel vs a Database there is an increased latency

Wishlist:

- When PowerApps offers new features that apply to the current application the current/future features can be updated as well
- If PowerPlatform goes down what would be a great backup solution (i.e. Whatsapp)
- Improved PowerPlatform to allow more than 1 creator to edit the PowerApp at the same time

REFERENCES

Microsoft Formula Reference - Power Apps. (April, 2024). Microsoft Build.

Available at: <https://learn.microsoft.com/en-us/power-platform/power-fx/formula-reference>

Microsoft Power Platform Developer Documentation. (April, 2024). Microsoft Build.

Available at: <https://learn.microsoft.com/en-us/power-platform/developer/>

Microsoft Power Apps Documentation. (April, 2024). Microsoft Build.

Available at: <https://learn.microsoft.com/en-us/power-apps/>

Microsoft Power Automate Documentation. (April, 2024). Microsoft Build.

Available at: <https://learn.microsoft.com/en-us/power-automate/>