Boosting your online administration efficiency by automating complex course operations for a large online program

Penn Engineering | Online Education
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Background Information

Administering an at-scale, online Master's program and coordinating with large teams of TAs with limited staff can be overwhelming. Technology to support these programs can be underutilized or, worse, create additional barriers for staff. However, they can also offer endless opportunities for highly collaborative, efficient, and data-driven environments.

Each semester, we have hundreds of assignment extension requests across the courses in our program. Each course might have its own unique extension process criteria based on the faculty's expectations and course requirements. Course staff needed to manually track each extension request, check with the professor, reply to students and document the record. This tedious process was necessary to our program and increased the workload of course staff.

We started thinking about the possibility of automating this assignment extension process.
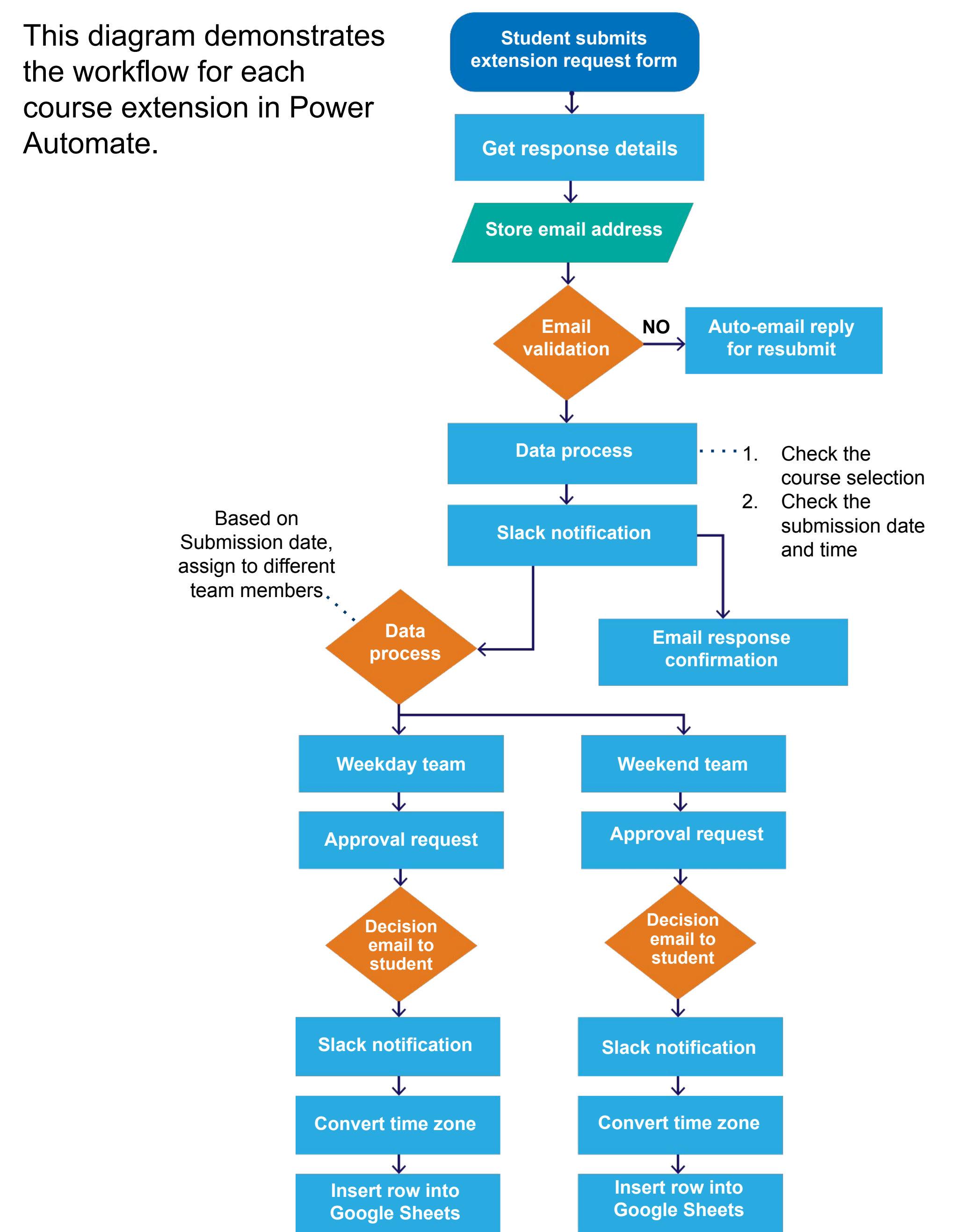
What We Did

Analyzing and reviewing
- Identified aspects in the current workflow that could be improved
- Focused on automated real-time communication
- Reduced repeated steps
- Standardized the request form and centralized the data collection

Researching the right automation tool
- Has integrations with Slack, Google Sheet and Gmail
- Easy to design, use and implement
- Easy to access and collaborate with others

Designing and Testing
- Successfully designed an assignment extension workflow via MS Power Automate
- Collaborated with team members to test the workflow
- Demoed this new workflow with faculty and piloted it in two courses
- Collected the feedback and made adjustments and improvements

Implementing to all courses
- Met with every faculty member to demo automated extension workflow
- Modified the workflow based on personal communication preference via Slack or Email
- Generated weekly extension request reports

How We Did It

This diagram demonstrates the workflow for each course extension in Power Automate.

Results

Success Rates
The Power Automate Assignment extension workflow has been successfully implemented to all courses for Spring 2022.
- Successfully ran - 586 times (Jan,8th, 2022 - March 9th, 2022)
- Failure ran - 1 time (Hitting an action limit designed to protect the connector service being called)

Efficiency and Productivity
The improved workflow has significantly increased efficiency and productivity.
- Cut-off wait-time: Automated real-time communication to simplify workflow
- Time efficiency: 60-70% less time to process each extension request

Integrations
Power Automate offers the variety of third-party tool integrations that are required for this workflow
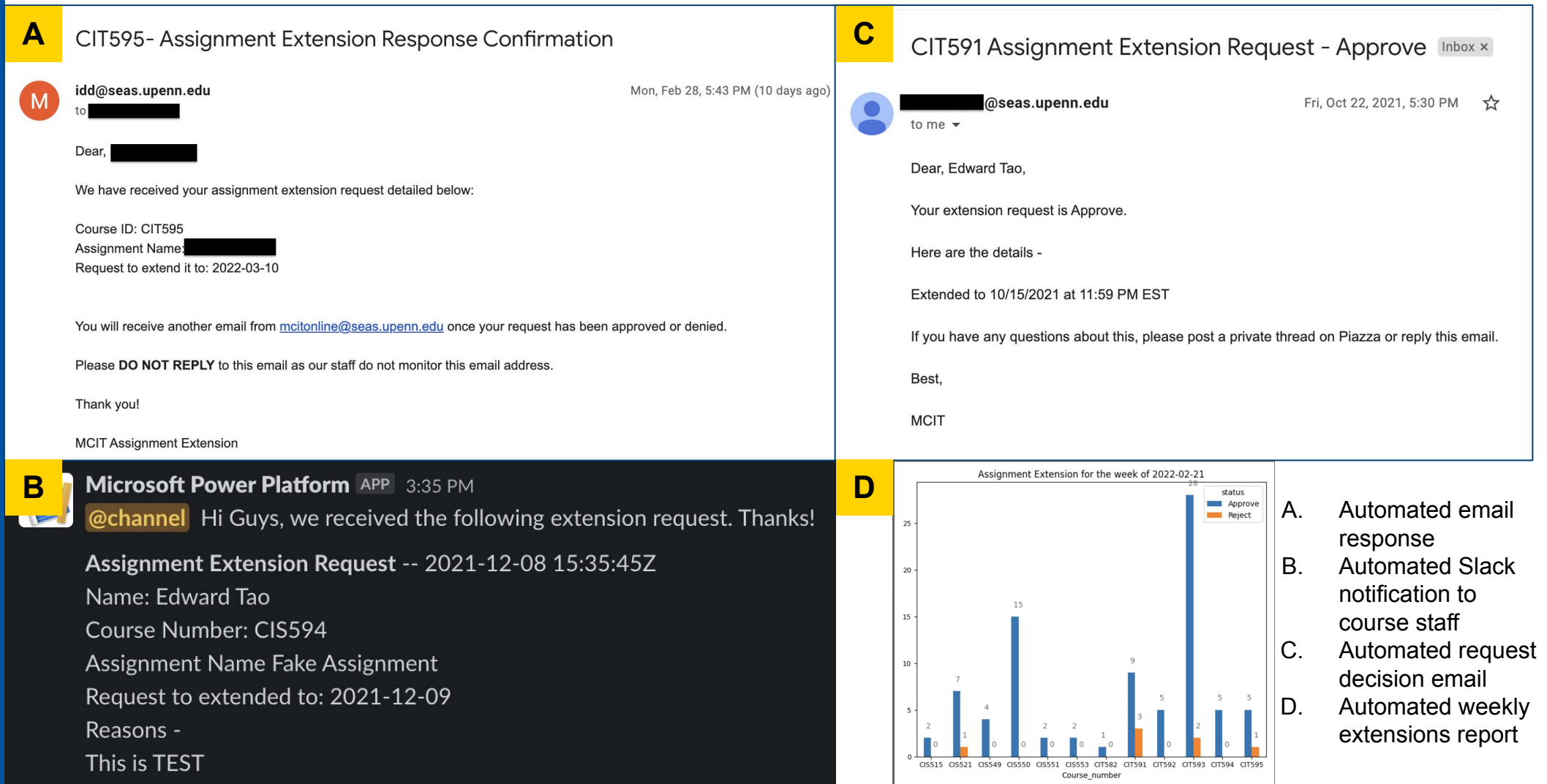- Slack - Communication with Team members/Faculty
- Google Gmail - Communication with Students
- Google Drive - Document records in Google Sheets
- Microsoft Forms - Students to submit extension requests

Data Reports
By centralizing the data collection for all extension requests, we are able to improve our collaboration with other team members.
- Collaboration with Student Affairs Team: The extension request data is shared with the student affairs team for analyzing students at-risk in all courses.
- Weekly data report - Automate weekly data collection/visualization/sharing process

A. Automated email response
B. Automated Slack notification to course staff
C. Automated request decision email
D. Automated weekly extensions report

Conclusions

This automated process has increased performance by improving the online program operation efficiency, offering a personalized approval process for different courses, and implementing data-driven decisions through automated data reports.

The enhanced operation process has…
- Reduced the manual and repeated workload on the staff by integrating with automated emails and Google Sheets
- Offered a real-time communication channel for faculty/course staff
- Offered a personalized communication approach for instructors based on their preferences by integrating with Slack and email approval
- Improved centralized data collection for better analyzing at-risk students and coordinating with the student affairs teams
- Tracked extension statuses per courses via automated data report

Future Directions

Future Implementation
Microsoft Power Automate is a robust tool that can be utilized for other operations.

Integration with Learning Management System
For assignment extension requests, Course Staff still need to manually adjust due dates within the Learning Management System. To further automate this workflow, LMS API Integration can be added to MS Power Automate.

TA Onboarding Process
Getting the large teams of TAs access to platforms each semester with limited staff can be overwhelming. Power Automate can be implemented into the TA Onboarding process so that TAs can be automatically added to the Ed Tech Tool platforms once they have successfully completed their onboarding training.

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