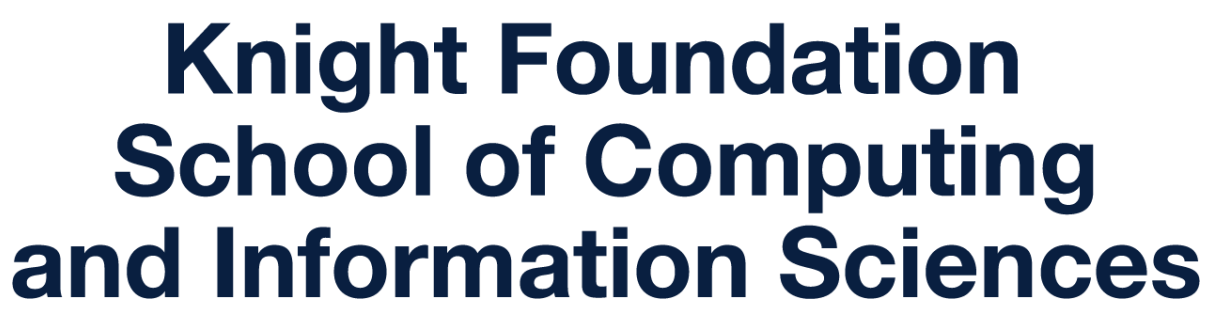




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Mentor: Patricia McDermott-Wells, PhD.

Instructor: *Dr. Masoud Sadjadi*, Florida International University

Requirements

The current system is the second iteration of a project that was designed and partially developed in the previous semester. The first version of the application was not complete. Our team was assigned the task of making the application usable and deploy it.



Object Design

Power Apps incorporates aspects of object-oriented design, although it is not strictly an object-oriented programming (OOP) environment.

- **Component-Based Architecture:** utilizes a component-based architecture where the app is built using reusable components.
- **Canvas Apps:** provides a high degree of flexibility and customization.
- **Data Integration:** Microsoft Excel as the unique database and Power Automate for tasks automation
- **Responsive Design:** Power Apps supports responsive design principles, allowing applications to be used across different devices and screen sizes.

- Components as Objects: reusable components and standard controls like text boxes, buttons, etc.
- Encapsulation: achieved using components and controls that contain their own properties (data) and actions (behavior).
- Inheritance and Polymorphism: achieved through the reuse of components and templates, which dynamically change their behavior based on context, such as different data inputs or user interactions.

Implementation

The Start Semester flow is the only flow that's available at the beginning of each semester. It kick-starts the creation of the Teams channels based on tutoring classes offered in the current semester, using unique IDs.



Figure 3: Create Teams
Channels Power Automate flow

Verification

Additionally, visual input warnings are provided if the maximum character limit is reached (currently, 50 characters).

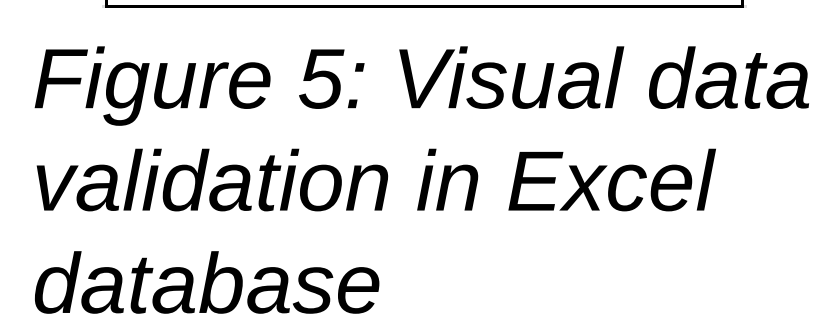


Figure 5: Data validation within Create Teams Channels flow

Screenshots



Summary

The Microsoft's Power suite of tools offer a great low-code no-code development and automation environment to develop business applications.

Although the current version of the app is mostly ready to be deployed and used by the STARS administrative team, our Capstone II team did not have the chance to test the application in a semester with live student data. Further development is recommended as possible deployment hurdles could arise. A wish list of features exists based on recommendations from our mentor and ideas our own team recommended to make the application even more useful to FIU's STARS Tutoring administration.

Acknowledgement

The material presented in this poster is based upon the work supported by Patricia McDermott-Wells, PhD. I thank my mentor for her assistance, cooperation and the mentorship that I received throughout this process. I also thank Corey Slayton for his great insights about the work completed in the first version of the application.