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Senior Design

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ABET Constraint Essay

The economic impact of the Bearcat Pantry project can be measured by the quantity of low income students that make use of the pantry. Because the pantry's primary target audience is low income students, the pantry is attempting to help financially insecure students who may not be able to afford food. By making use of the pantry, low income students will be able to supplement their food expenses with food received from the pantry. At the moment, it is estimated that over 4,000 students qualify as low income students, meaning that they are eligible for the Bearcat Pantry program. The goal of this project is to facilitate a smooth, online user experience for students making use of the pantry, to increase visibility of the pantry, increase program participation, increase volunteering with the pantry, and increase donations to the pantry. To accomplish the computerization of the Bearcat Pantry, the main financial blocker that must be overcome is the server. It will most likely either be supported by UCIT on campus or a cloud service account funded by the university (such as AWS). As a result, the Bearcat Pantry will provide an economic benefit to the most financially insecure section of the student body, with minimal funding requirements.

Low income students will be able to go to the pantry to receive food and clothing items based on need. As mentioned previously, there are over 4,000 students eligible to

use the food pantry. However, less than 200 students currently use the pantry. The goal is to make this project anonymous to students who might otherwise be embarrassed by their need to use the pantry. This project will be used by students among all cultures and races at the university. Our project will have to meet the needs of students from different cultures so this project will need to be able to supply the foods that meets their need.

The Bearcat Pantry is a non-profit organization will have a high social impact on the University of Cincinnati discourse community. Hopefully, many students will be able to benefit from the project. It will be extremely beneficial to these low income students in need. The pantry can help these students worry about one less thing – being a full-time student is already stressful enough. The new system we are creating for the pantry will make the actual pantry more accessible, and reach a wider target audience.

The project will require consideration of security, both on the side of the users and the pantry. By integrating our project with UC's existing login system, we aim to ensure that our system is as secure as any official UC system. Eavesdropping on our system could compromise the identities of students who use the pantry and would otherwise like to remain anonymous. An attack like this could damage the reputation of the pantry itself, potentially causing students to distrust the system and push away those that might otherwise see the pantry as a necessity. Should the database being used to catalog the pantry's resources not be thoroughly secured, there is also a potential for privacy leaks as well as other data integrity issues. Currently, there is a desire to store some statistics involving pantry usage, such as what items are most

frequently taken by students, that could include some amount of identifying information.

Not only this, but if the information is tampered with then the pantry will be unable to trust these statistics as well as stock numbers, collected survey results, purchase details, etc. Since our system will be expected to handle the login credentials of real students, it is incredibly important that the entire system be as secure as possible.