Lab 1- Descriptive Paper

Rosalie Oliva

Computer Science Department, ODU University

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Professor: Thomas Kennedy

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Lab 1 V1

Due to today's critical age transmission of knowledge from educators to students have become an important concern. Based on some research, Team Crystal discover main problem characteristics as the current aggregation is not strong enough to be considered centralized; the aggregation that exits does not support tracking of changes and formal artifact aggregation in academic environments does not exist. Team Crystal facilitate the creation of A3, a framework for aggregation and artifacts for educators, researchers, and students. A3 main goals are to keep information available, normalized, and centralized allowing to connect to a large knowledge repository to upload and edit scholar resources.

Team Crystal Project for Cs410 class, the team explain the product description pretty much emphasizing the main aspect that is a knowledge repository. A3 will grant access to different users and its lowest level will be as a guest that they will only be able to read and download ana artifact. Everything will depend on which level the user has.

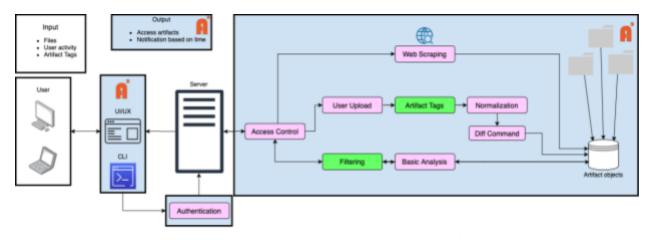


Figure 1: Major Functional Components Diagram

A3 is was built to assist the students and faculty from ODU, specially to assist little researches or student groups. Team Crystal will be working to expand resources and users beyond members of ODU. A couple features and capabilities of our prototype is presented in the next table:

Feature/Capabilities Comparison Chart		
Feature/Capability	Real World	A³ Prototype
Database Storage	x	х
Graphical User Interface	х	Limited
Command Line Interface	х	Х
User Authentication	Х	Limited
Access Control	Х	Х
Artifact Upload	Х	Х
Repository Creation	Х	Х
Artifact Normalization	Х	Х
Artifact Comparison	х	Х
Artifact Update	х	Х
Artifact/Repo Deletion	x	
Webscraping	Х	Limited
Artifact Charge Record	Х	Х
Artifact Exporting	х	Х
Artifact/Repo Searching	Х	Limited
Artifact Contributor List	х	
Artifact/Repo Sharing	х	
Artifact/Repo Comments	х	

Figure 2: Features and capabilities comparison chart between real-world ${\cal A}^3$ and prototype ${\cal A}^3$

References

- Blackboard Archive Extractor. (2016, December 15) cs.odu.edu. Retrieved March 10, 2020, from https://www.cs.odu.edu/~cpi/old/411/crystals17/.
- Brunelle J., personal communication, March 2, 2020.
- Carroll, J., Choo, C. W., Dunlap, D., Isenhour, P., Kerr, S., MacLean, A., & Rosson, M. (2003).

 Knowledge Management Support for Teachers. Educational Technology Research and

 Development, 51(4), 42-64. www.jstor.org/stable/30221184
- Daghfous, A., Belkhodja, O., & Angell, L. C. (2013). Understanding and managing knowledge loss. Journal of Knowledge Management.
- Davenport, T., Long, M. & Beers, M.. (1997). Building Successful Knowledge Management

 Projects [Working Paper]. Retrieved March 8, 2020, from

 https://www.researchgate.net/publication/200045855_Building_Successful_Knowledge

 —

 Management_Projects.
- Document Management Software | eFileCabinet. (2020). eFileCabinet. Retrieved February 20, 2020, from https://www.efilecabinet.com.
- Doorn, P., Tjalsma, H. Introduction: archiving research data. Arch Sci 7, 1–20 (2007). https://doi.org/10.1007/s10502-007-9054-6\
- Domes, S. (2017). Progressive Web Apps with React: Create lightning fast web apps with native power using React and Firebase. Packt Publishing Ltd.

File Sharing and Sync For Education, Schools and Universities - FileCloud. (2020). FileCloud. Retrieved February 20, 2020, from https://www.getfilecloud.com/file-sharing-and-sync-for-education/.

- Fox, S. (2010). Beginning SharePoint 2010 Development. John Wiley & Sons.
- GitHub Features: The right tools for the job. (2020). GitHub. Retrieved March 10,il 2020, from https://github.com/features#team-management.
- Kennedy, T. (2020, January 21). *Home · Wiki · Thomas J. Kennedy / cs-roars-proposal*. GitLab.

 Retrieved 26 April 2020, from https://git-community.cs.odu.edu/tkennedy/cs-roars-proposal/-/wikis/home.
- Kennedy T. J., personal communication, February 12, 2020.
- Kim, J. (2011). Motivations of faculty self-archiving in institutional repositories. The Journal of Academic Librarianship, 37(3), 246-254.
- MacFarlane, J. (2006). *Pandoc About pandoc*. Pandoc.org. From https://pandoc.org/index.html.
- Maier, R., & Hädrich, T. (2006). Centralized versus peer-to-peer knowledge management systems. Knowledge and Process Management, 13(1), 47-61.
- Nvlpubs.nist.gov. (n.d.). *Glossary of Key Information Security Terms*. From https://nvlpubs.nist.gov/nistpubs/ir/2013/NIST.IR.7298r2.pdf.
- Tsapps.nist.gov. (2020). *Data Loss Prevention*. From https://tsapps.nist.gov/publication/get_pdf.cfm?pub_id=904672.

Van de Sompel, H., Nelson, M. L., Sanderson, R., Balakireva, L. L., Ainsworth, S., & Shankar, H. (2009). Memento: Time travel for the web. arXiv preprint arXiv:0911.1112.

Xie, I., & Matusiak, K. K. (2016, July 29). Digital preservation. *Science Direct* (255-279). Retrieved March 10, 2020, from

https://www.sciencedirect.com/science/article/pii/B9780124171121000090

Zeil, S. (2019, December 26). Building the Website . cs.odu.edu. Retrieved 26 April 2020, from

https://www.cs.odu.edu/~zeil/cowem/Public/buildingTheWebsite/index.html.

Zeil, S. (2020, January 21). zeil / CoWeM - Course Websites from Markdown . GitLab. From https://git-community.cs.odu.edu/zeil/Course_Website_Management.