Project Plan Presentation
IT Datamart Microservice for BitBucket

The Capstone Experience

Team UWM
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Project Sponsor Overview

• Nation’s #1 Mortgage Lender
• Founded in 1986 – headquarters in Pontiac, MI
• Net Income of $931.9 million in FY 2022
Project Functional Specifications

• UWM has very large data sets being constantly generated – such as Git metadata
• This project assists UWM in analyzing risks
• Increases their ability to make informed business decisions
• Will be implemented throughout the production and deployment of various technologies
Project Design Specifications

• Integrate into larger collection system at UWM
• Metadata consolidation for UWM Git repositories
• Cleaning and processing of large data sets for further use
• Set up SQL database that can be used for data visualization, as well as further developments of other projects
Screen Mockup: Developer View
Screen Mockup: Architect View
Screen Mockup: Team Lead View
Screen Mockup: SQL Server View

Total Number of Files: 626,862,862
Total Space Used: 638,253 GB
Average Number of Files added a day: 8,382,762
Operations a Day: 2,362,788,627
Project Technical Specifications

• Business aggregation logic using .NET micro-service
• Data pulled from file share server will be regularly exported using a schedule automation server
• After processing, data is stored in Microsoft SQL Server
• Data visualization ideally with Power BI
Project System Architecture
Project System Components

• Software Platforms / Technologies
  ▪ .NET
  ▪ Power BI
  ▪ Microsoft SQL server
  ▪ Docker
  ▪ Orkes
Project Risks

Risks

- **Subset of a Larger Project at UWM**
  - We are one branch of a larger system that is being worked on and because of that we have strict design requirements
  - Closely coordinating with UWM team and requesting and reviewing documentation

- **UWM Technology Requirements**
  - Due to the nature of UWM’s workflow, we have to use and stay completely within their systems and internal tools.
  - Campus visit and subsequent communications to establish and fully integrate our tools

- **Scale**
  - UWM is a massive company that handles massive amounts of money, there is no room for error
  - Design check-ins and approvals making sure UWM is aware of what we are doing and can give us systems that reduce harm that can be caused

- **Security**
  - UWM deals with people’s personal financials which need to be away from public view or access at all times.
  - Security check-ins and documentation on how other teams at UWM operate to keep secure. As well using only internal tools and systems to prevent any possible issues
Questions?