1. Briefly describe the artifact. What is it? When was it created?

I am converting the “MatchMaking” to find local games web application that I created in CS360 into a full-stack web application for the 3rd artifact. I utilized the SQLite database I created in that app and have converted it to a cloud MongoDB/ NoSQL database, I will be including photos from the cloud application as part of the proof, along with the files.

2. Justify the inclusion of the artifact in your ePortfolio. Why did you select this item? What specific components of the artifact showcase your skills and abilities in software development? How was the artifact improved?

I selected this artifact for three reasons. The first involves why I chose the relational database in the first place. When I chose a SQL database, it provided the benefit of being simpler to conceptualize and organize how all the parts would work together. I shifted to a NoSQL database because some of the parts benefited greatly from faster read speeds. The queue portion of the project would need to be as fast as possible and would require more adding and removing of varying information. The second is wanting the future application to be able to grow to include multiple games that could have a variety of different player counts and formats as making new games won’t be under my control I’ll need to be able to remain flexible about what games the player can choose from and adapt to unusual circumstance a noSQL database fits that better. The third is that it

provides more room for growth. An example growth path that I wanted to be prepared for was to change from a first-in/first-out queue to a matchmaking involving profile tags and identifiers that would allow a profile to vary its profile personality to find better games. A NoSQL database would allow me to update information and have varying information attached to the profile to be updated in the future.

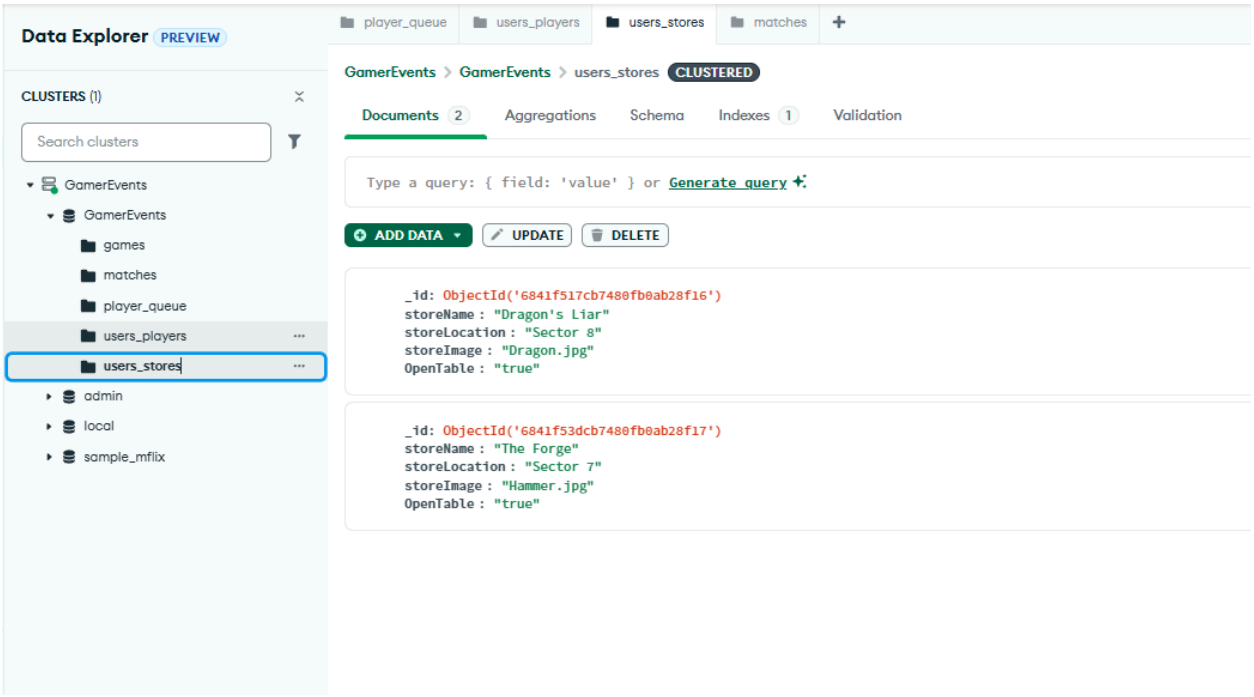
3 . Did you meet the course outcomes you planned to meet with this enhancement in the Module Tree? Do you have any updates to your outcome-coverage plans?

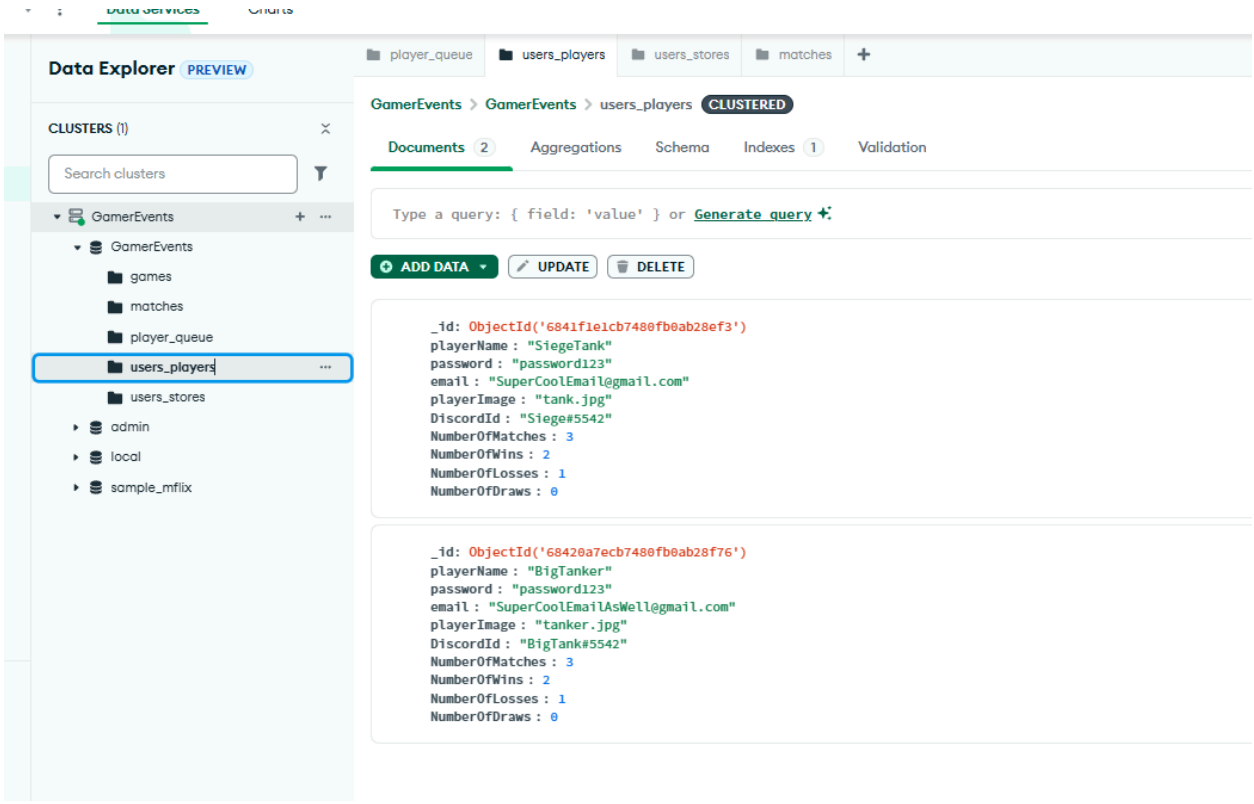
Yes, I successfully converted the SQLite table Database from CS360 into a cloud MongoDB database. I have been working on Module One most of this week to include linking this database and have the express server mostly up and running but implementing the CRUD for the Milestone 1 project is still being worked on. I have shrunk my original goals with module one to having the Full Stack “MatchingMaking” to a queue with a login feature finished for the e-Portofilo. If you can confirm this will work, I can focus on a new plan for the data and algorithms portion.

4. Reflect on the process of enhancing and modifying the artifact. What did you learn as you were creating it and improving it? What challenges did you face?

I learned that I struggle with scope creep; the conversion took longer than I think it should, as I kept changing it for different “long-term” growth goals. I wanted to design the project to be “future proof,” was constantly reworking the project before the initial project was finished. While this comes with the advantage of thinking forward for growth, it struggles to reward the immediate goals and finish a project. Going forward, whenever I start a future project, I will detail the immediate goals with a set of predetermined “future’ goals, then build the project in the best way to complete that rather than trying to make a bigger, over-encompassing project.

Photos detailing the new database structure




Data Explorer PREVIEW
CLUSTERS (1)
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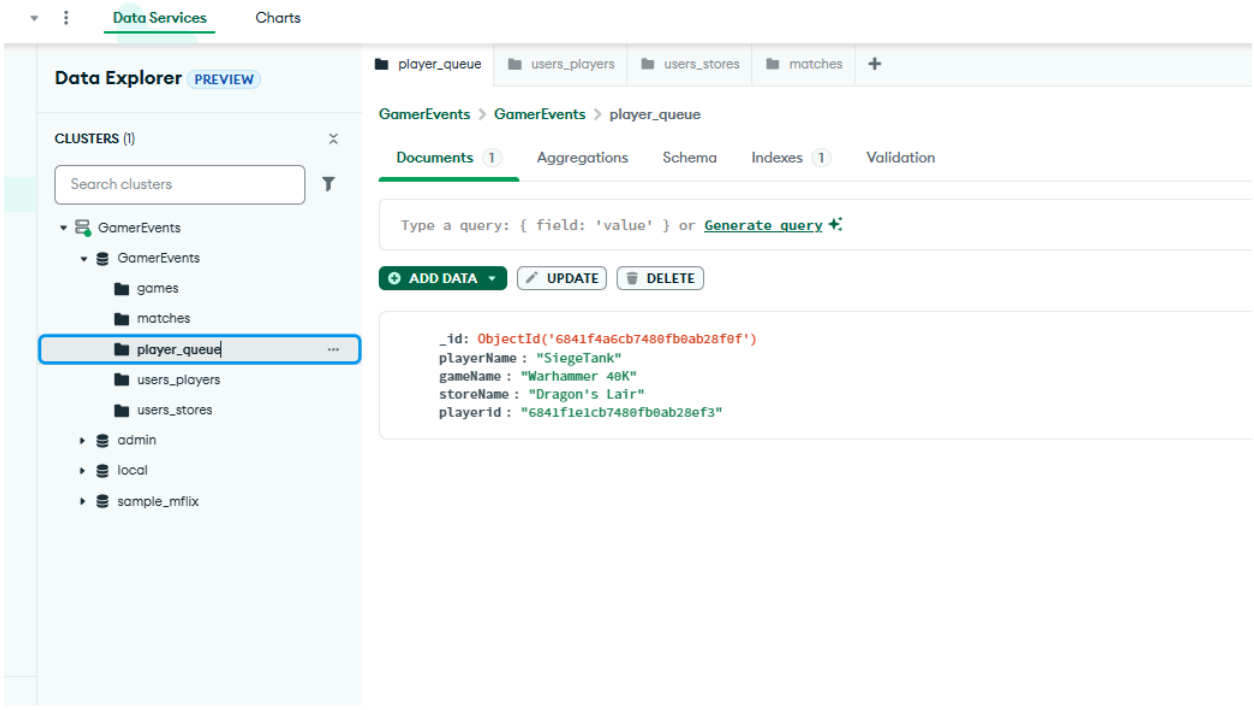
_id: ObjectId('6841f1e1cb7480fb0ab28ef3')
playerName : "SiegeTank"
password : "password123"
email : "SuperCoolEmail@gmail.com"
playerImage : "tank.jpg"
DiscordId : "Siege#5542"
NumberOfMatches : 3
NumberOfWins : 2
NumberOfLosses : 1
NumberOfDraws : 0
_id: ObjectId('68420a7ecb7480fb0ab28f76')
playerName : "BigTanker"
password : "password123"
email : "SuperCoolEmailAsWell@gmail.com"
playerImage : "tanker.jpg"
DiscordId : "BigTank#5542"
NumberOfMatches : 3
NumberOfWins : 2
NumberOfLosses : 1
NumberOfDraws : 0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Validation
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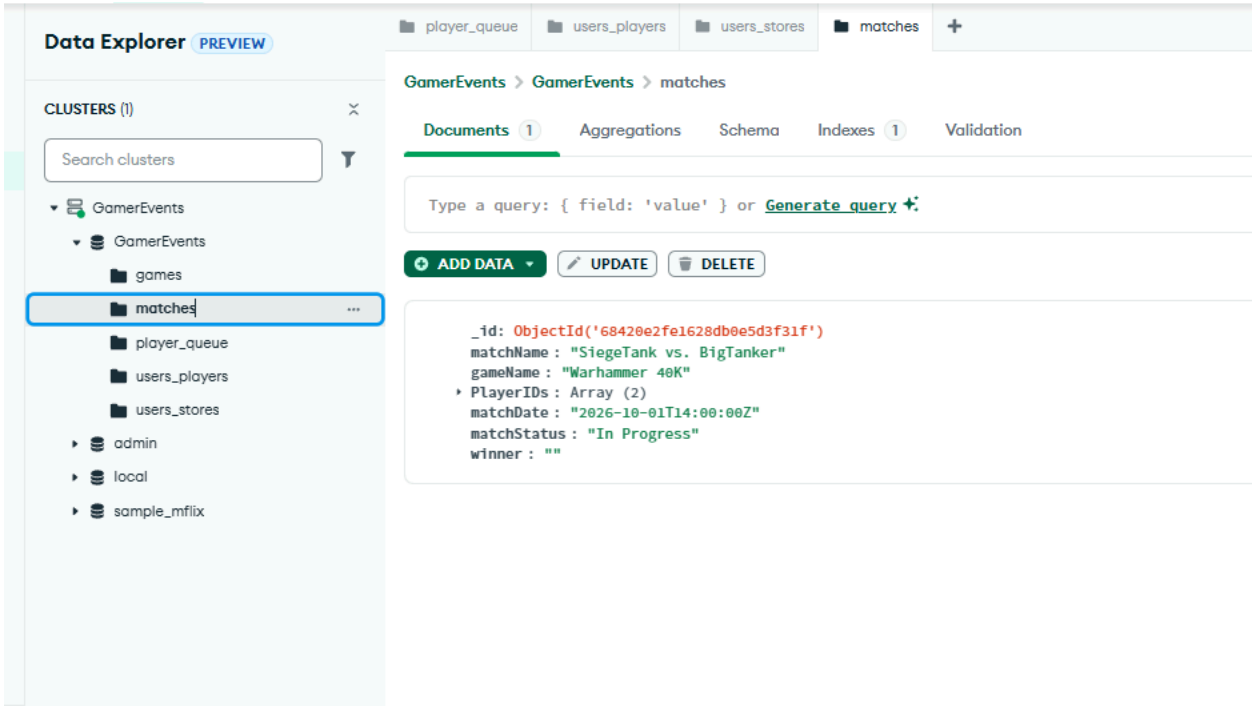
ADD DATA
UPDATE
DELETE
_id: ObjectId('6841f4a6cb7480fb0ab28f0f')
playerName : "SiegeTank"
gameName : "Warhammer 40K"
storeName : "Dragon's Lair"
playerid : "6841f1e1cb7480fb0ab28ef3"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Type a query: { field: 'value' } or Generate query
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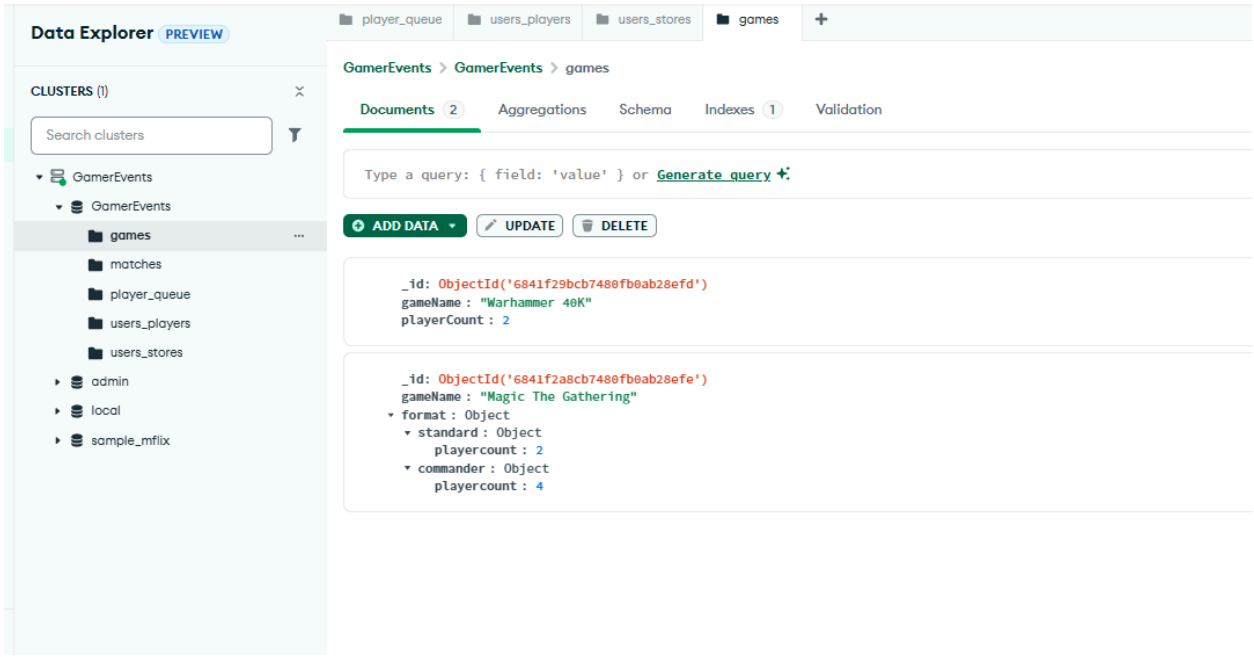
UPDATE
DELETE
_id: ObjectId('68420e2fe1628db0e5d3f31f')
matchName : "SiegeTank vs. BigTanker"
gameName : "Warhammer 40K"
PlayerIDs : Array (2)
matchDate : "2026-10-01T14:00:00Z"
matchStatus : "In Progress"
winner : ""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CLUSTERS (1)
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Aggregations
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Indexes 1
Validation
Type a query: { field: 'value' } or Generate query
ADD DATA
UPDATE
DELETE
_id: ObjectId('6841f29bcb7480fb0ab28efd')
gameName : "Warhammer 40K"
playerCount : 2
_id: ObjectId('6841f2a8cb7480fb0ab28efe')
gameName : "Magic The Gathering"
format : Object
standard : Object
playercount : 2
commander : Object
playercount : 4