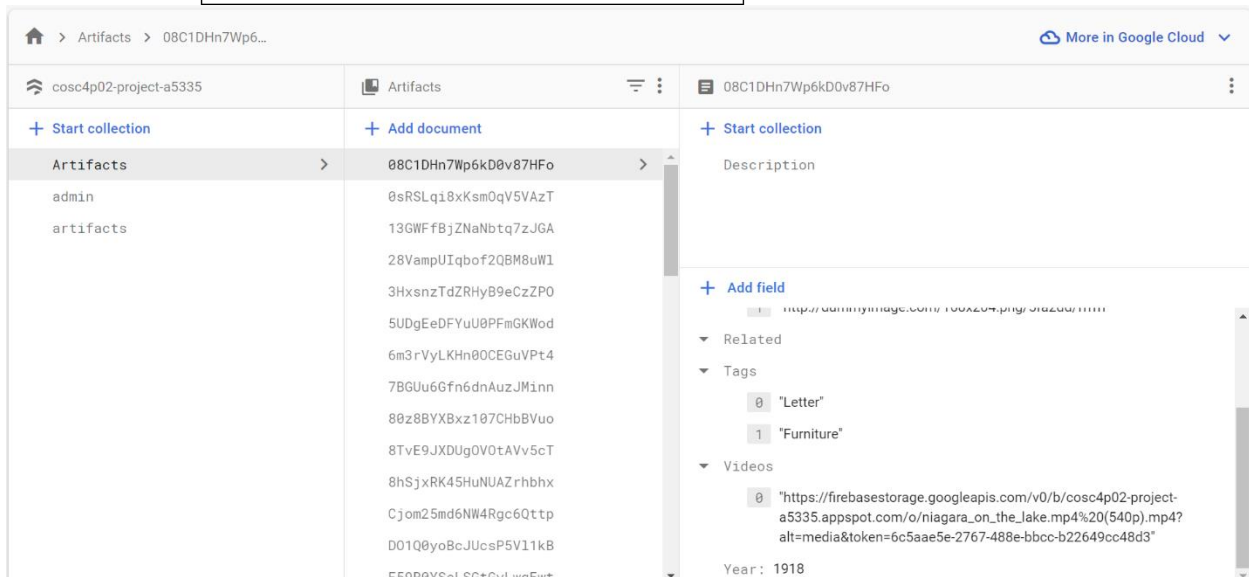
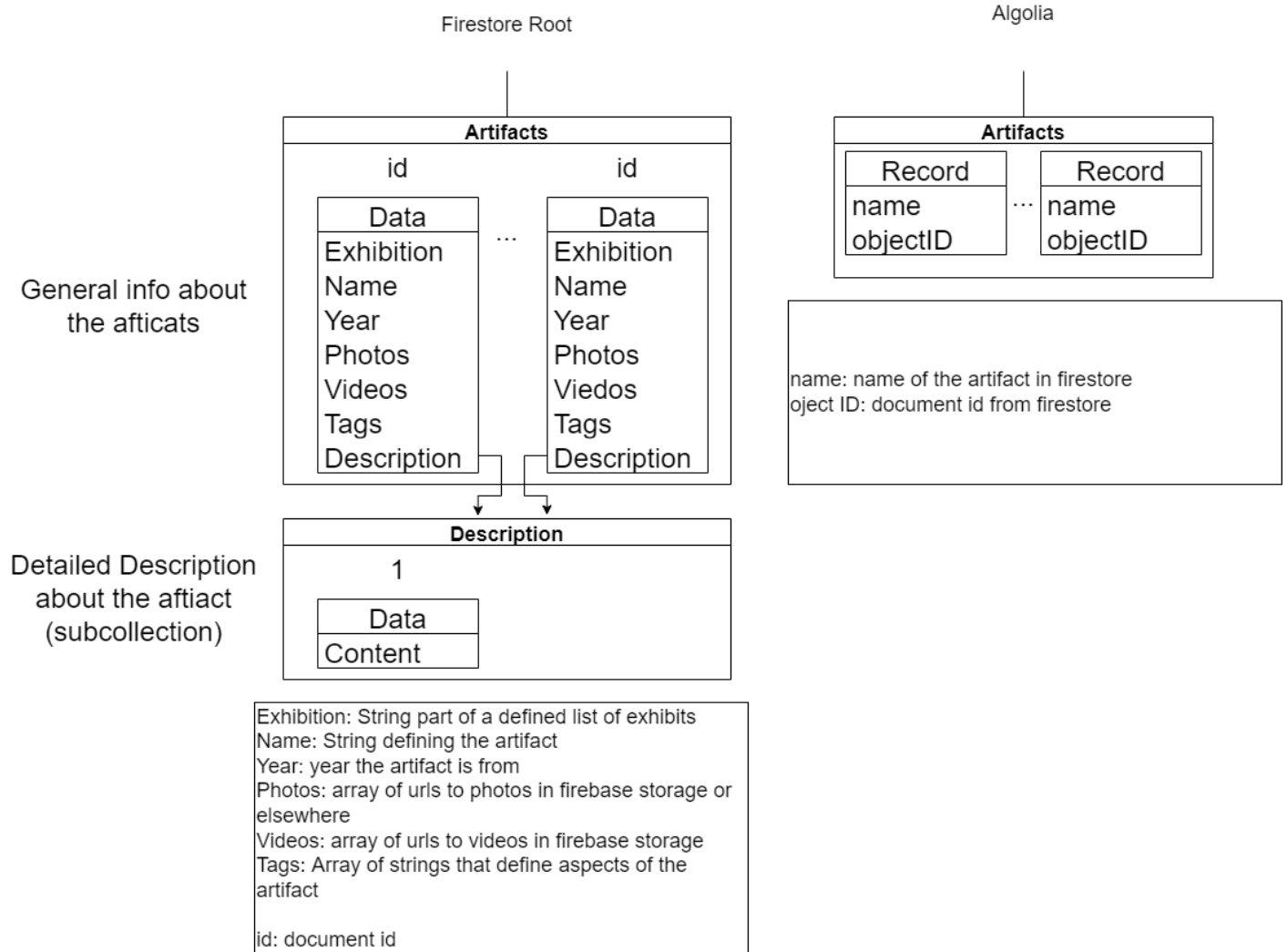


Database Work (By: Yannick De Caluwe)

Design:



Adding data into the data base is simple with the method created we can simply give a JSON file with records that will be added to the data base in the format defined above.

Above and below are a couple screenshots of the web fire store console of one document after 50 documents had been added (the data is mock data created using <https://www.mockaroo.com>)

The first screenshot shows the 'Artifacts' collection in the Firestore console. The left pane displays a list of documents with keys like 'admin' and 'artifacts'. The right pane shows the details of a document with a key of '08C1DHn7Wp6kD0v87HfO'. The document contains fields for 'Exhibition' (Indigenous History), 'Name' (Bitwolf), 'Photos' (two dummy image URLs), 'Related' (empty), and 'Tags' (Letter, Furniture).

The second screenshot shows the 'Description' collection. The left pane displays a list of documents with keys like '08C1DHn7Wp6kD0v87HfO' and 'sGPQ3Yq1BjRFVqLYWsxsf'. The right pane shows the details of a document with a key of 'sGPQ3Yq1BjRFVqLYWsxsf'. The document contains a 'content' field with a long Latin text snippet.

Index

No. records 50 avg. record size 15.068

New...

Add records

Manage index



Show hints



Browse Configuration Replicas Search API Logs Stats UI Demos

Search



Search

50 hits matched in 1 ms



+ Add Query Parameter

Display preferences

Query alternatives

Details

Grid

List

JSON

1

objectID "zScXV4lf5supUr9t5Fr1"
name "Sonair"



Testing some queries to make sure it works as expected:

Tested methods:

```
console.log("Description Test:")
await getDescription("28a5McparsUxTeoRj8rN")
console.log("Exhibit Test 1:")
await queryExhibit(["War of 1812"])
console.log("Exhibit Test 2:")
await queryExhibit(["Indigenous History", "War of 1812"])
console.log("Name Test 1:")
await queryName("strint")
console.log("Name Test 2:")
await queryName("str")
console.log("Year Range Test 1:")
await queryYearRange(["Indigenous History", "War of 1812"],1750,1850)
console.log("Tags Test 1:")
await queryTags(["Indigenous History", "War of 1812"],["Furniture","Book"])
console.log("Tags Test 2:")
await queryTags(["Indigenous History", "War of 1812"],["Furniture"])

console.log("Full fillter Test 1:")
await queryTagsExhibitsYearRange(["Indigenous History"],["Furniture"],1750,1850)
console.log("Full fillter Test 2:")
await queryTagsExhibitsYearRange(["War of 1812"],["Furniture"],1750,1850)
console.log("Full fillter Test 3:")
await queryTagsExhibitsYearRange(["Indigenous History"],["Book"],1750,1850)
console.log("Full fillter Test 4:")
await queryTagsExhibitsYearRange(["Reminiscence"],["Furniture"],1700,1850)
```

Query Results:

Description Test:
▶ {content: 'Nulla ut erat id mauris vulputate elementum.'}
Exhibit Test 1:
▶ {Tags: Array(2), Photos: Array(2), Videos: Array(1), Name: 'Voltsillam', Exhibition: 'War of 1812', ...}
▶ {Name: 'Greenlam', Videos: Array(1), Photos: Array(2), Exhibition: 'War of 1812', Tags: Array(2), ...}
▶ {Tags: Array(2), Exhibition: 'War of 1812', Year: 1758, Videos: Array(1), Photos: Array(2), ...}
▶ {Year: 1765, Tags: Array(2), Name: 'Rank', Photos: Array(2), Exhibition: 'War of 1812', ...}
▶ {Photos: Array(2), Exhibition: 'War of 1812', Tags: Array(2), Videos: Array(1), Name: 'Subin', ...}
▶ {Tags: Array(2), Exhibition: 'War of 1812', Name: 'Prodder', Photos: Array(2), Year: 1711, ...}
▶ {Videos: Array(1), Year: 1777, Name: 'Kanlam', Tags: Array(2), Exhibition: 'War of 1812', ...}
▶ {Tags: Array(2), Exhibition: 'War of 1812', Photos: Array(2), Videos: Array(1), Year: 1969, ...}
▶ {Exhibition: 'War of 1812', Photos: Array(2), Year: 1723, Tags: Array(2), Name: 'Quo Lux', ...}
▶ {Tags: Array(2), Photos: Array(2), Exhibition: 'War of 1812', Videos: Array(1), Name: 'Sub-Ex', ...}

Name Test 1:
▶ {Videos: Array(1), Tags: Array(2), Year: 1844, Photos: Array(2), Name: 'Stringtough', ...}
▶ {Tags: Array(2), Videos: Array(1), Year: 1790, Exhibition: 'General Niagara History', Photos: Array(2), ...}
▶ {Exhibition: 'Reminiscence', Year: 1701, Videos: Array(1), Tags: Array(2), Name: 'Stringtough', ...}
Name Test 2:
▶ {Photos: Array(2), Exhibition: 'Indigenous History', Tags: Array(2), Name: 'Stringtough', Videos: Array(1), ...}
▶ {Videos: Array(1), Photos: Array(2), Name: 'Stringtough', Year: 1790, Tags: Array(2), ...}
▶ {Name: 'Stringtough', Exhibition: 'Reminiscence', Photos: Array(2), Year: 1701, Videos: Array(1), ...}
Year Range Test 1:
▶ {Year: 1751, Videos: Array(1), Name: 'Ronstring', Tags: Array(2), Exhibition: 'Indigenous History', ...}
▶ {Year: 1758, Videos: Array(1), Tags: Array(2), Exhibition: 'War of 1812', Name: 'Fintone', ...}
▶ {Exhibition: 'War of 1812', Photos: Array(2), Name: 'Rank', Videos: Array(1), Year: 1765, ...}
▶ {Videos: Array(1), Tags: Array(2), Name: 'Greenlam', Photos: Array(2), Exhibition: 'War of 1812', ...}
▶ {Videos: Array(1), Name: 'Vagram', Year: 1777, Photos: Array(2), Tags: Array(2), ...}
▶ {Tags: Array(2), Exhibition: 'War of 1812', Year: 1777, Photos: Array(2), Name: 'Kanlam', ...}
▶ {Name: 'Flexidy', Year: 1786, Photos: Array(2), Videos: Array(1), Exhibition: 'Indigenous History', ...}
▶ {Name: 'Sonsing', Tags: Array(2), Photos: Array(2), Year: 1828, Exhibition: 'Indigenous History', ...}
▶ {Photos: Array(2), Name: 'Stringtough', Year: 1844, Videos: Array(1), Tags: Array(2), ...}

Tags Test 1:

- ▶ {Year: 1711, Name: 'Prodder', Exhibition: 'War of 1812', Photos: Array(2), Videos: Array(1), ...}
- ▶ {Tags: Array(2), Exhibition: 'Indigenous History', Videos: Array(1), Name: 'Matsoft', Year: 1714, ...}
- ▶ {Year: 1723, Tags: Array(2), Photos: Array(2), Name: 'Quo Lux', Videos: Array(1), ...}
- ▶ {Photos: Array(2), Tags: Array(2), Name: 'Transcof', Exhibition: 'Indigenous History', Year: 1729, ...}
- ▶ {Year: 1751, Photos: Array(2), Videos: Array(1), Name: 'Ronstring', Exhibition: 'Indigenous History', ...}
- ▶ {Name: 'Fintone', Exhibition: 'War of 1812', Tags: Array(2), Videos: Array(1), Photos: Array(2), ...}
- ▶ {Exhibition: 'War of 1812', Year: 1765, Photos: Array(2), Name: 'Rank', Videos: Array(1), ...}
- ▶ {Tags: Array(2), Exhibition: 'War of 1812', Photos: Array(2), Name: 'GreenLam', Videos: Array(1), ...}
- ▶ {Photos: Array(2), Exhibition: 'Indigenous History', Year: 1777, Tags: Array(2), Name: 'Vagram', ...}
- ▶ {Exhibition: 'War of 1812', Name: 'KanLam', Videos: Array(1), Photos: Array(2), Year: 1777, ...}
- ▶ {Exhibition: 'Indigenous History', Photos: Array(2), Tags: Array(2), Year: 1786, Videos: Array(1), ...}
- ▶ {Tags: Array(2), Exhibition: 'Indigenous History', Name: 'Sonsing', Year: 1828, Photos: Array(2), ...}
- ▶ {Videos: Array(1), Name: 'Stringtough', Year: 1844, Exhibition: 'Indigenous History', Tags: Array(2), ...}
- ▶ {Exhibition: 'Indigenous History', Tags: Array(2), Year: 1855, Photos: Array(2), Videos: Array(1), ...}
- ▶ {Exhibition: 'War of 1812', Photos: Array(2), Name: 'Voltsillam', Year: 1899, Tags: Array(2), ...}
- ▶ {Tags: Array(2), Year: 1915, Photos: Array(2), Name: 'Viva', Exhibition: 'Indigenous History', ...}
- ▶ {Exhibition: 'Indigenous History', Tags: Array(2), Name: 'Bitwolf', Videos: Array(1), Photos: Array(2), ...}
- ▶ {Year: 1920, Tags: Array(2), Exhibition: 'Indigenous History', Photos: Array(2), Name: 'Lotstring', ...}
- ▶ {Year: 1921, Name: 'Sub-Ex', Photos: Array(2), Exhibition: 'War of 1812', Tags: Array(2), ...}
- ▶ {Tags: Array(2), Year: 1962, Photos: Array(2), Exhibition: 'Indigenous History', Name: 'Fintone', ...}
- ▶ {Tags: Array(2), Name: 'Fintone', Exhibition: 'War of 1812', Videos: Array(1), Photos: Array(2), ...}
- ▶ {Year: 1972, Name: 'Vagram', Tags: Array(2), Photos: Array(2), Exhibition: 'Indigenous History', ...}
- ▶ {Year: 1987, Photos: Array(2), Videos: Array(1), Tags: Array(2), Exhibition: 'War of 1812', ...}

Tags Test 2:

- ▶ {Videos: Array(1), Exhibition: 'Indigenous History', Photos: Array(2), Name: 'Ronstring', Year: 1751, ...}
- ▶ {Videos: Array(1), Year: 1758, Tags: Array(2), Exhibition: 'War of 1812', Name: 'Fintone', ...}
- ▶ {Tags: Array(2), Year: 1777, Name: 'Kanlam', Photos: Array(2), Exhibition: 'War of 1812', ...}
- ▶ {Name: 'Flexidy', Year: 1786, Exhibition: 'Indigenous History', Photos: Array(2), Tags: Array(2), ...}
- ▶ {Photos: Array(2), Exhibition: 'Indigenous History', Tags: Array(2), Year: 1828, Name: 'Sonsing', ...}
- ▶ {Year: 1844, Tags: Array(2), Photos: Array(2), Exhibition: 'Indigenous History', Name: 'Stringtough', ...}
- ▶ {Exhibition: 'Indigenous History', Videos: Array(1), Name: 'Bitwolf', Photos: Array(2), Year: 1918, ...}
- ▶ {Name: 'Sub-Ex', Exhibition: 'War of 1812', Photos: Array(2), Tags: Array(2), Videos: Array(1), ...}
- ▶ {Photos: Array(2), Exhibition: 'Indigenous History', Year: 1962, Name: 'Fintone', Videos: Array(1), ...}
- ▶ {Name: 'Subin', Tags: Array(2), Exhibition: 'War of 1812', Videos: Array(1), Photos: Array(2), ...}

Full fillter Test 1:

- ▶ {Videos: Array(1), Tags: Array(2), Year: 1751, Exhibition: 'Indigenous History', Name: 'Ronstring', ...}
- ▶ {Name: 'Flexidy', Videos: Array(1), Photos: Array(2), Year: 1786, Tags: Array(2), ...}
- ▶ {Name: 'Sonsing', Photos: Array(2), Exhibition: 'Indigenous History', Videos: Array(1), Year: 1828, ...}
- ▶ {Year: 1844, Name: 'Stringtough', Photos: Array(2), Videos: Array(1), Tags: Array(2), ...}

Full fillter Test 2:

- ▶ {Year: 1758, Exhibition: 'War of 1812', Photos: Array(2), Name: 'Fintone', Videos: Array(1), ...}
- ▶ {Year: 1777, Videos: Array(1), Exhibition: 'War of 1812', Tags: Array(2), Photos: Array(2), ...}

Full fillter Test 3:

- ▶ {Videos: Array(1), Year: 1777, Name: 'Vagram', Exhibition: 'Indigenous History', Tags: Array(2), ...}
- ▶ {Tags: Array(2), Year: 1786, Videos: Array(1), Name: 'Flexidy', Photos: Array(2), ...}
- ▶ {Videos: Array(1), Photos: Array(2), Exhibition: 'Indigenous History', Tags: Array(2), Name: 'Sonsing', ...}

Full fillter Test 4:

- ▶ {Exhibition: 'Reminiscence', Videos: Array(1), Tags: Array(2), Year: 1701, Photos: Array(2), ...}
- ▶ {Videos: Array(1), Year: 1716, Photos: Array(2), Tags: Array(2), Exhibition: 'Reminiscence', ...}
- ▶ {Year: 1723, Name: 'Hatity', Tags: Array(2), Videos: Array(1), Exhibition: 'Reminiscence', ...}
- ▶ {Videos: Array(1), Photos: Array(2), Tags: Array(2), Name: 'Namfix', Year: 1740, ...}
- ▶ {Videos: Array(1), Exhibition: 'Reminiscence', Photos: Array(2), Tags: Array(2), Year: 1761, ...}

Testing of Functions to Manipulate Data

Function calls:

```
console.log("addArtifact test:");
await addArtifact("War of 1812", "Left over couch", 1812, ["http://dummyimage.com/166x141.png/5fa2dd/ffffff"],
["https://firebasestorage.googleapis.com/v0/b/cosc4p02-project-a5335.appspot.com/o/sample_video.mp4%20(240p).mp4"],
["Furniture"], "This couch was damaged and left over after the war used by the military");
let data=await queryName("Left over couch");
console.log(data);
let id=data[0][0]; //array should contain 1 element which has id in the first element
data=await getDescription(id);
console.log(data);

console.log("updateArtifactDescription test:");
await updateArtifactDescription(id, "This is a new description for the couch");
data=await getDescription(id);
console.log(data.content);

console.log("updateArtifactExhibit test:");
await updateArtifactExhibit(id, "Reminiscence");
data=await getArtifact(id);
console.log(data.Exhibition);

console.log("updateArtifactName test 1:");
await updateArtifactName(id, "This is a Test");
data=await queryName("Left over couch");
console.log(data);
console.log("updateArtifactName test 2:");
data=await queryName("This is a Test");
console.log(data);

console.log("updateArtifactYear test:");
await updateArtifactYear(id, 1900);
data=await getArtifact(id);
console.log(data.Year);

//Photos
console.log("addArtifactPhotos test:");
await addArtifactPhotos(id, "new photo url");
data=await getArtifact(id);
console.log(data.Photos);

console.log("removeArtifactPhotos test:");
await removeArtifactPhotos(id, "new photo url");
data=await getArtifact(id);
console.log(data.Photos);

console.log("updateArtifactPhotos test:");
await updateArtifactPhotos(id, ["http://dummyimage.com/111x111.png/dddddd/000000", "http://dummyimage.com/246x190.png/dddddd/000000"]);
data=await getArtifact(id);
console.log(data.Photos);

//Videos
console.log("addArtifactVideos test:");
await addArtifactVideos(id, "new video url");
data=await getArtifact(id);
console.log(data.Videos);

console.log("removeArtifactVideos test:");
await removeArtifactVideos(id, "new video url");
data=await getArtifact(id);
console.log(data.Videos);

console.log("updateArtifactVideos test:");
await updateArtifactVideos(id, ["video url 1", "video url 2"]);
data=await getArtifact(id);
console.log(data.Videos);
```

```
//Tags
console.log("addArtifactTags test:");
await addArtifactTags(id, "Map");
data=await getArtifact(id);
console.log(data.Tags);

console.log("removeArtifactTags test:");
await removeArtifactTags(id, "Map");
data=await getArtifact(id);
console.log(data.Tags);

console.log("updateArtifactTags test:");
await updateArtifactTags(id, ["Letter","Book"]);
data=await queryTagsExhibitsYearRange(["Reminiscence"],["Letter"],1900,1900);
console.log(data[0][1].Tags);

//Related
console.log("addRelated test:");
await addRelated(id, "08C1DHn7Wp6kD0v87HFo");
data=await getArtifact(id);
console.log(data.Related);

console.log("removeRelated test:");
await removeRelated(id, "08C1DHn7Wp6kD0v87HFo");
data=await getArtifact(id);
console.log(data.Related);

console.log("updateRelated test:");
await updateRelated(id, ["0sRSLqi8xKsmOqV5VAzT","13GWFfBjZNaNbtq7zJGA"]);
data=await getArtifact(id);
console.log(data.Related);

//Delete
console.log("deleteArtifact test:");
await deleteArtifact(id);
data=await getArtifact(id);
console.log(data);
```


Results:

```
addArtifact test:
  ▶ [Array(2)]
  ▶ {content: 'This couch was damaged and left over after the war used by the military'}
updateArtifactDescription test:
This is a new description for the couch
updateArtifactExhibit test:
Reminiscence
updateArtifactName test 1:
  ▶ []
updateArtifactName test 2:
  ▶ [Array(2)]
updateArtifactYear test:
1900
addArtifactPhotos test:
  ▶ (2) ['http://dummyimage.com/166x141.png/5fa2dd/ffffff', 'new photo url']
removeArtifactPhotos test:
  ▶ ['http://dummyimage.com/166x141.png/5fa2dd/ffffff']
updateArtifactPhotos test:
  ▶ (2) ['http://dummyimage.com/111x111.png/ddddd/000000', 'http://dummyimage.com/246x190.png/ddddd/000000']
addArtifactVideos test:
  ▶ (2) ['https://firebasestorage.googleapis.com/v0/b/cosc4p...=media&token=0687e508-8936-4547-b707-e858b9bb0ddd', 'new video url']
removeArtifactVideos test:
  ▶ ['https://firebasestorage.googleapis.com/v0/b/cosc4p...=media&token=0687e508-8936-4547-b707-e858b9bb0ddd']
updateArtifactVideos test:
  ▶ (2) ['video url 1', 'video url 2']
addArtifactTags test:
  ▶ (2) ['Furniture', 'Map']
removeArtifactTags test:
  ▶ ['Furniture']
updateArtifactTags test:
  ▶ (2) ['Letter', 'Book']
addRelated test:
  ▶ ['08C1DHn7Wp6kD0v87HfO']
removeRelated test:
  ▶ []
updateRelated test:
  ▶ (2) ['0sRSLqi8xKsmOqV5VAzT', '13GWfBjZNaNbtq7zJGA']
deleteArtifact test:
undefined
```