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Link to GitHub repository: https://github.com/hsiaotingluv/CS3219-OTOT-TaskE

Caching Task

Task E1: Successful GET request that retrieves a large amount of data from a local database

1. Call a get request that triggers getAirbnbData function.

```
app.get("/airbnb", getAirbnbData);
```

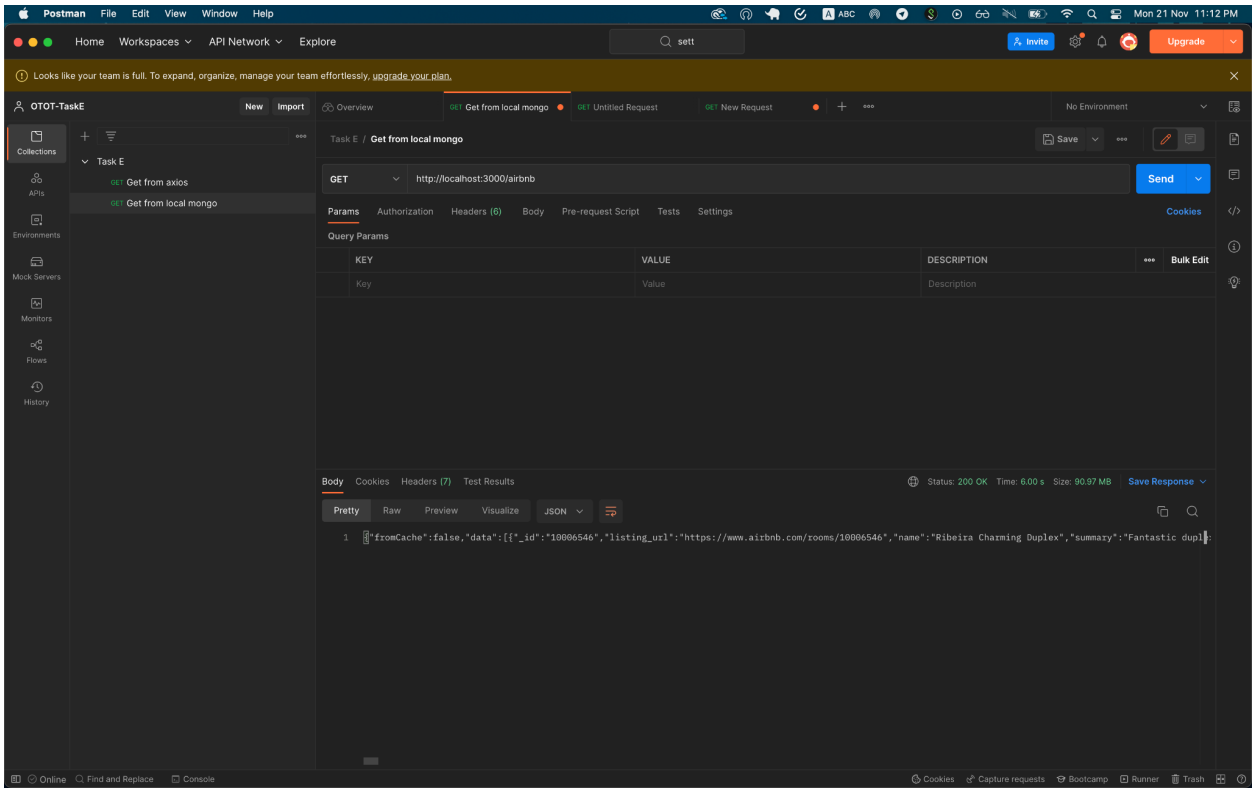
2. Get data from local MongoDB, if data exists in redisClient, fetch the cache results and return. Else, fetch data from MongoDB.

```
async function getAirbnbData(req, res) {
  let results;
  let isCached = false;

  try {
    const cacheResults = await redisClient.get("airbnbData");
    if (cacheResults) {
      console.log("fetching from Redis Client");
      isCached = true;
      results = JSON.parse(cacheResults);
    } else {
      console.log("fetching from local MongoDB");
      results = await fetchData();
      if (results.length === 0) {
        throw "API returned an empty array";
      }
      await redisClient.set("airbnbData", JSON.stringify(results));
    }

    res.status(200).send({
      fromCache: isCached,
      data: results,
    });
  } catch (error) {
    console.error(error);
    res.status(404).send("Data unavailable");
  }
}
```

```
async function fetchData(propertyType) {
  // const apiResponse = await axios.get(
  //   `https://www.fishwatch.gov/api/species/${species}`
  // );
  // console.log("Request sent to the API");
  // return apiResponse.data;

  const airbnb = [];
  const res = await db.collection("listingsAndReviews").find({}).toArray();

  res.forEach((element) => {
    airbnb.push(element);
  });

  return airbnb;
}
```

Task E2: Subsequent successful GET request to the same endpoint that demonstrates substantial performance improvement due to Redis caching

1. Test with http://localhost:3000/airbnb



2. Verifies that subsequent successful GET request to the same endpoint that demonstrates substantial performance improvement due to Redis caching.