

Lab: MongoDB Practice 1

You may still use the testDB database for this lab.

Part A

Start from an empty inventory collection and populate the collection using the following command.

```
db.inventory.insertMany([
  { item: "canvas", qty: 100, size: { h: 28, w: 35.5, uom: "cm" }, status: "A" },
  { item: "journal", qty: 25, size: { h: 14, w: 21, uom: "cm" }, status: "A" },
  { item: "mat", qty: 85, size: { h: 27.9, w: 35.5, uom: "cm" }, status: "A" },
  { item: "mousepad", qty: 25, size: { h: 19, w: 22.85, uom: "cm" }, status: "P" },
  { item: "notebook", qty: 50, size: { h: 8.5, w: 11, uom: "in" }, status: "P" },
  { item: "paper", qty: 100, size: { h: 8.5, w: 11, uom: "in" }, status: "D" },
  { item: "planner", qty: 75, size: { h: 18.85, w: 30, uom: "cm" }, status: "D" },
  { item: "postcard", qty: 45, size: { h: 10, w: 15.25, uom: "cm" }, status: "A" },
  { item: "sketchbook", qty: 80, size: { h: 14, w: 21, uom: "cm" }, status: "A" },
  { item: "sketch pad", qty: 95, size: { h: 22.85, w: 30.5, uom: "cm" }, status: "A" }
]);
```

1. Find all the documents with qty greater than or equal to 50 and with status "A" or "P".
2. Find all the documents with h greater than 15 and less than 20. The result should only return the item and the qty fields.

Part B

Start from an empty inventory collection and populate the collection using the following command.

```
db.inventory.insertMany([
  { item: "journal", instock: [ { warehouse: "A", qty: 5 }, { warehouse: "C", qty: 15 } ] },
  { item: "notebook", instock: [ { warehouse: "C", qty: 5 } ] },
  { item: "paper", instock: [ { warehouse: "A", qty: 60 }, { warehouse: "B", qty: 15 } ] },
  { item: "planner", instock: [ { warehouse: "A", qty: 40 }, { warehouse: "B", qty: 5 } ] },
  { item: "pen", instock: [ { warehouse: "A", qty: 50 }, { warehouse: "B", qty: 10 }, { warehouse: "C", qty: 20 } ] },
  { item: "postcard", instock: [ { warehouse: "B", qty: 15 }, { warehouse: "C", qty: 35 } ] },
  { item: "pencil" },
]);
```

1. Find the documents where the instock array has at least one element that satisfies both conditions: warehouse equal to "A" and qty greater than 40.
2. Find the documents where the first element in the instock array has qty greater than 10 and the second element in that array has qty less than 15.