

Partie1

Question 1:

```
> use ecommerceDB
< switched to db ecommerceDB
> db.createCollection("produits")
< { ok: 1 }
> db.createCollection("clients")
< { ok: 1 }
> db.createCollection("commandes")
< { ok: 1 }
ecommerceDB>
```

Question 2:

a

```
> db.produits.insertMany([
  { nom: "Smartphone XYZ", categorie: "Électronique", prix: 599.99, stock: 10 },
  { nom: "Chaussures de sport", categorie: "Mode", prix: 75.00, stock: 30 },
  { nom: "Laptop ABC", categorie: "Électronique", prix: 899.99, stock: 5 },
  { nom: "Livre de recettes", categorie: "Livres", prix: 20.00, stock: 50 },
  { nom: "Casque audio", categorie: "Électronique", prix: 49.99, stock: 25 }
])
< {
  acknowledged: true,
  insertedIds: {
    '0': ObjectId('690e669ebf72655e7ebc7cd1'),
    '1': ObjectId('690e669ebf72655e7ebc7cd2'),
    '2': ObjectId('690e669ebf72655e7ebc7cd3'),
    '3': ObjectId('690e669ebf72655e7ebc7cd4'),
    '4': ObjectId('690e669ebf72655e7ebc7cd5')
  }
}
```

B

```

> db.clients.insertMany([
  { nom: "Ahmed Ben Saïd", email: "ahmed.ben.said@mail.com", adresse: "10 Rue Al Madina, Casablanca, Maroc", telephone: "+212600123456" },
  { nom: "Fatima El Khalil", email: "fatima.el.khalil@mail.com", adresse: "25 Avenue des Palmiers, Rabat, Maroc", telephone: "+212600987654" },
  { nom: "Noura Bakkar", email: "noura.bakkar@mail.com", adresse: "22 Rue des Palmiers, Tunis, Tunisie", telephone: "+216983456789" },
  { nom: "Aisha Darwish", email: "aisha.darwish@mail.com", adresse: "35 Rue Al Kindi, Damas, Syrie", telephone: "+963991234567" },
  { nom: "Hassan Al-Haddad", email: "hassan.haddad@mail.com", adresse: "12 Rue Al Mutanabi, Bagdad, Irak", telephone: "+964781223344" }
])
< {
  acknowledged: true,
  insertedIds: [
    '0': ObjectId('690e66d0bf72655e7ebc7cd6'),
    '1': ObjectId('690e66d0bf72655e7ebc7cd7'),
    '2': ObjectId('690e66d0bf72655e7ebc7cd8'),
    '3': ObjectId('690e66d0bf72655e7ebc7cd9'),
    '4': ObjectId('690e66d0bf72655e7ebc7cda')
  ]
}

```

C

```

> db.commandes.insertMany([
  {
    client: "Fatima El Khalil",
    produits: [
      { nom: "Smartphone XYZ", quantite: 1, prix: 599.99 },
      { nom: "Livre de recettes", quantite: 2, prix: 20.00 }
    ],
    date_commande: ISODate("2024-11-01"),
    statut: "livrée",
    montant_total: 639.99
  },
  {
    client: "Hassan Al-Haddad",
    produits: [
      { nom: "Laptop ABC", quantite: 1, prix: 899.99 },
      { nom: "Casque audio", quantite: 1, prix: 49.99 }
    ],
    date_commande: ISODate("2024-11-03"),
    statut: "en cours",
    montant_total: 949.98
  }
])
< {
  acknowledged: true,
  insertedIds: [
    '0': ObjectId('690e6714bf72655e7ebc7cdb'),
    '1': ObjectId('690e6714bf72655e7ebc7cdc')
  ]
}

```

Question3:

```
> db.produits.find({ stock: { $gt: 0 } })
< [
  {
    _id: ObjectId('690e669ebf72655e7ebc7cd1'),
    nom: 'Smartphone XYZ',
    categorie: 'Électronique',
    prix: 599.99,
    stock: 10
  },
  {
    _id: ObjectId('690e669ebf72655e7ebc7cd2'),
    nom: 'Chaussures de sport',
    categorie: 'Mode',
    prix: 75,
    stock: 30
  },
  {
    _id: ObjectId('690e669ebf72655e7ebc7cd3'),
    nom: 'Laptop ABC',
    categorie: 'Électronique',
    prix: 899.99,
    stock: 5
  },
  {
    _id: ObjectId('690e669ebf72655e7ebc7cd4'),
    nom: 'Livre de recettes',
    categorie: 'Mode',
    prix: 15,
    stock: 20
  }
]
```

Question 4:

```
> db.clients.find({ adresse: "Paris" });
<
```

Question 5:

```
> db.commandes.find({ client: "Fatima El Khalil" });
< [
  {
    _id: ObjectId('690e4ab13cba7878c21ba851'),
    client: 'Fatima El Khalil',
    produits: [
      {
        nom: 'Smartphone XYZ',
        quantite: 1
      },
      {
        nom: 'Livre de recettes',
        quantite: 2
      }
    ],
    date_commande: '2024-11-01',
    statut: 'livrée',
    montant_total: 639.99
  }
]
```

Question 6;

```
> db.commandes.find({ statut: "livrée" });
< [
  {
    _id: ObjectId('690e4ab13cba7878c21ba851'),
    client: 'Fatima El Khalil',
    produits: [
      {
        nom: 'Smartphone XYZ',
        quantite: 1
      },
      {
        nom: 'Livre de recettes',
        quantite: 2
      }
    ],
    date_commande: '2024-11-01',
    statut: 'livrée',
    montant_total: 639.99
  }
]
```

Question 7

```
>
> db.produits.updateOne(
  { nom: "Smartphone XYZ" },
  { $inc: { stock: 10 } }
);
< {
  acknowledged: true,
  insertedId: null,
  matchedCount: 1,
  modifiedCount: 1,
  upsertedCount: 0
}
```

Qusetion 8

```
> db.commandes.updateOne(  
  { client: "Hassan Al-Haddad" },  
  { $set: { statut: "expédiée" } }  
)  
< {  
  acknowledged: true,  
  insertedId: null,  
  matchedCount: 1,  
  modifiedCount: 1,  
  upsertedCount: 0  
}
```

Question 9:

```
> db.produits.deleteOne({ stock: 0 });  
< {  
  acknowledged: true,  
  deletedCount: 0  
}
```

Question 10:

```
>  
> db.commandes.deleteMany({ statut: "annulée" });  
< {  
  acknowledged: true,  
  deletedCount: 0  
}
```

Question 11:

```
> db.produits.find({
  categorie: "Électronique",
  prix: { $lt: 100 }
});
< [
  {
    _id: ObjectId('690e49713cba7878c21ba84b'),
    nom: 'Casque audio',
    categorie: 'Électronique',
    prix: 49.99,
    stock: 25
}
```

Question 12

```
}
```

```
> db.commandes.aggregate([
  { $group: { _id: "$client", totalCommandes: { $sum: 1 } } }
]);
< [
  {
    _id: 'Fatima El Khalil',
    totalCommandes: 1
  },
  {
    _id: 'Hassan Al-Haddad',
    totalCommandes: 1
  }
]
```

Question 13:

```
}

> db.produits.find().sort({ prix: -1 }).limit(5);

< [
  {
    _id: ObjectId('690e49713cba7878c21ba849'),
    nom: 'Laptop ABC',
    categorie: 'Électronique',
    prix: 899.99,
    stock: 5
  },
  {
    _id: ObjectId('690e49713cba7878c21ba847'),
    nom: 'Smartphone XYZ',
    categorie: 'Électronique',
    prix: 599.99,
    stock: 20
  },
  {
    _id: ObjectId('690e49713cba7878c21ba848'),
    nom: 'Chaussures de sport',
    categorie: 'Mode',
    prix: 75,
    stock: 30
  },
  {
    _id: ObjectId('690e49713cba7878c21ba84b'),
    nom: 'Casque audio',
    categorie: 'Électronique',
    prix: 49.99,
  }
]
```