MongoDB Assignment 2

1. Create a database named `university` and a collection named `students`. Insert multiple student documents with fields: `name`, `age`, `department`, and `grades`.

```
db.students.insertMany([
    {
        "name": "Alice",
        "age": 20,
        "department": "Computer Science",
        "grades": { "math": 85, "english": 92 }
    },
    {
        "name": "Bob",
        "age": 21,
        "department": "Physics",
        "grades": { "math": 88, "physics": 90 }
    },
    {
        "name": "Charlie",
        "age": 22,
        "department": "Mathematics",
        "grades": { "math": 95, "statistics": 89 }
    }
]);
```

2. Write a query to display all students who are in the `Computer Science` department.
3. Write a query to update the grades of a student named `Alice` by adding a new subject `programming` with a grade of 93.
4. Write a query to increment the age of all students by 1.
5. Write a query to delete all students who are 23 years old.
6. Write a query to create an index on the `name` field of the `students` collection.
7. Write an aggregation query to group students by their department and calculate the average age in each department.
8. Write a query to find all students who have scored more than 90 in any subject.
9. Write a query to add a new field `graduated` set to `false` for all students who are in the `Mathematics` department.
10. How can you retrieve only the `name` and `department` fields for all students, excluding the `_id` field?