ASSIGNMENT NO:10

/*PROBLEM STATEMENT:MongoDB – Aggregation and Indexing: Design and Develop
MongoDB Queries using aggregation and indexing with suitable example using MongoDB*/

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gescoe@gescoe-OptiPlex-3010:~$ mongo
MongoDB shell version: 2.6.12
connecting to: test
> use TEB_39;
switched to db TEB_39
> db.Student.insert({"Rollno":4,"Name":"Gauri","Branch":"Computer","Marks":85});
WriteResult({ "nInserted" : 1 })
> db.Student.find().pretty();
{
    "_id" : ObjectId("66c5c039f69f7a64bf57360b"),
    "Rollno" : 1,
    "Name" : "Saee",
    "Branch" : "Computer",
    "Marks" : 95
}
{
    "_id" : ObjectId("66c5c05af69f7a64bf57360c"),
    "Rollno" : 2,
    "Name" : "Sayali",
    "Branch" : "IT",
    "Marks" : 75
}
{
    "_id" : ObjectId("66c5c0a1f69f7a64bf57360e"),
    "Branch" : "AIDS",
    "Marks" : 80
}
{
    "_id" : ObjectId("66c5cab76de7af48add9b83b"),
    "Rollno" : 4,
    "Name" : "Gauri",
    "Branch" : "Computer",
    "Marks" : 85
}
> db.Student.aggregate([{$group:{_id:"$Branch",Total_marks:{$sum:"$Marks"}}}]);
{ "_id" : "AIDS", "Total_marks" : 80 }
```

```
{ "_id" : "IT", "Total_marks" : 75 }
{ "_id" : "Computer", "Total_marks" : 180 }

> db.Student.aggregate([{$group:{_id:"$Branch",Maximum_marks:{$max:"$Marks"}}}]);
{ "_id" : "AIDS", "Maximum_marks" : 80 }
{ "_id" : "IT", "Maximum_marks" : 75 }
{ "_id" : "Computer", "Maximum_marks" : 95 }

> db.Student.aggregate([{$group:{_id:"$Branch",Minimum_marks:{$min:"$Marks"}}}]);
{ "_id" : "AIDS", "Minimum_marks" : 80 }
{ "_id" : "IT", "Minimum_marks" : 75 }
{ "_id" : "Computer", "Minimum_marks" : 85 }

> db.Student.aggregate([{$group:{_id:"$Branch",Average_marks:{$avg:"$Marks"}}}]);
{ "_id" : "AIDS", "Average_marks" : 80 }
{ "_id" : "IT", "Average_marks" : 75 }
{ "_id" : "Computer", "Average_marks" : 90 }

> db.Student.aggregate([{$group:{_id:"$Branch",First_marks:{$first:"$Marks"}}}]);
{ "_id" : "AIDS", "First_marks" : 80 }
{ "_id" : "IT", "First_marks" : 75 }
{ "_id" : "Computer", "First_marks" : 95 }

> db.Student.aggregate([{$group:{_id:"$Branch",Last_marks:{$last:"$Marks"}}}]);
{ "_id" : "AIDS", "Last_marks" : 80 }
{ "_id" : "IT", "Last_marks" : 75 }
{ "_id" : "Computer", "Last_marks" : 85 }
>
```