



Course Overview



View Discussion

## Final Exam

### Final: Question 3

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The correct pipeline is the following:

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```
var pipeline = [{
  "$project": {
    "surname_capital": { "$substr": [{"$arrayElemAt": [
{"$split": [ "$name", " " ] }, 1]], 0, 1 ] },
    "name_size": {  "$add" : [{"$strLenCP": "$name"}, -1]},
    "name": 1
  }
},
{
  "$group": {
    "_id": "$name_size",
    "word": { "$push": "$surname_capital" },
    "names": {"$push": "$name"}
  }
},
{
  "$project": {
    "word": {
      "$reduce": {
        "input": "$word",
        "initialValue": "",
        "in": { "$concat": ["$$value", "$$this"] }
      }
    }
  },
}
```

```

        "names": 1
      }
    },
    {
      "$sort": { "_id": 1 }
    }
  ]

```

For this lab we picked the first letter of each person surname, **surname\_capital**, by splitting the **name** into an array

```

{"$split": [ "$name", " " ] }

```

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And by gathering the first letter of the surname using **\$substr** and **\$arrayElemAt**:

```

{ "$substr": [ {"$arrayElemAt": [ {"$split": [ "$name",

```

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We've also captured the number of all alphanumeric characters of the **name** field, except " ":

```

"name_size": {   "$add" : [{"$strLenCP": "$name"}, -1]}

```

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After grouping all first capital letters into **word** array, and all **name** into **names** values by the **name\_size**:

```

{
  "$group": {
    "_id": "$name_size",
    "word": { "$push": "$surname_capital" },
    "names": {"$push": "$name"}
  }
},

```

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We then **\$reduced** the resulting **word** array into a single string:

```

{
  "$project": {
    "word": {
      "$reduce": {

```

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```
        "input": "$word",
        "initialValue": "",
        "in": { "$concat": ["$$value", "$$this"] }
      }
    },
    "names": 1
  }
}
```

And finally sort the result:

```
{
  "$sort": { "_id": 1 }
}
```

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Proceed to next section