WEB TECH LAB FAT

QUESTION:

Develop a web application using NodeJS and ExpressJS

a)   Create a Form with appropriate CSS containing form elements or fields to get details from the user to create the above collections and insert 10 documents in each collection to MongoDB.

b)   Using ExpressJS application query the DB with results in an ordered list with CSS to return

    i. The name and gnp of all countries in Asia with a gnp greater than 123456.

    ii. The name of all countries having a population of fewer than 85,000. Order the results by country's name increasing alphabetically.

    iii.   The countries which have languages spoken by a percentage of at least 50% of the population. Include the language name and language percentage in your results. Order the results by percentage is decreasing.

(Non-anonymous question ⓘ)

code	name	continent	independence_year	population	gnp	head_of_state	...
AFG	Afghanistan	Asia	1919	22720000	5976.0	Mohammad Omar	...
NLD	Netherlands	Europe	1581	15864000	371362.0	Beatrix	...
				...			

countries

country_code	language	official	percentage
AFG	Pashto	T	52.4
NLD	Dutch	T	95.6
	...		

languages

ANSWER: lab_fat.html

```html
<!DOCTYPE html>
<html lang="en">

<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>20BIT0195 Countries</title>

</head>
```

```html
<body>
    <h1>20BIT0195 Country Information</h1>
    <form action="/" method="post">
        <table>
            <tr>
                <td>Country Code:</td>
                <td><input type="text" name="code"><br></td>
            </tr>

            <tr>
                <td>Name:</td>
                <td><input type="text" name="name"><br></td>
            </tr>

            <tr>
                <td>Continent:</td>
                <td><input type="text" name="continent"><br></td>
            </tr>

            <tr>
                <td>Independence Year:</td>
                <td><input type="number" name="iy"><br></td>
            </tr>

            <tr>
                <td>Population:</td>
                <td><input type="number" name="population"><br></td>
            </tr>

            <tr>
                <td>GNP:</td>
                <td><input type="number" name="gnp"><br></td>
            </tr>

            <tr>
                <td>Head_of_state:</td>
                <td><input type="text" name="hos"><br></td>
            </tr>

            <tr>
                <td>Language:</td>
                <td><input type="text" name="language"><br></td>
            </tr>

            <tr>
```
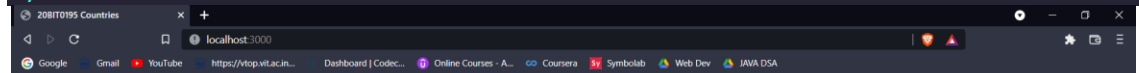
```html
            <td>Official:</td>
            <td><input type="text" name="official"><br></td>
        </tr>

        <tr>
            <td>Percentage:</td>
            <td><input type="number" name="percentage"><br></td>
        </tr>

        <tr>
            <td rowspan="2"><button type="submit">Send</button></td>
        </tr>
      </table>
    </form>
</body>

</html>
```

20BIT0195 Country Information

Country Code:
Name:
Continent:
Independence Year:
Population:
GNP:
Head_of_state:
Language:
Official:
Percentage:
Send

Lab_fat1.js

```javascript
const express = require("express");
const bodyParser = require("body-parser");
const app = express();
app.use(bodyParser.urlencoded({ extended: true }));

app.listen(3000, function () {
  console.log("Server started on port 3000");
});
```

```javascript
var MongoClient = require("mongodb").MongoClient;
var url = "mongodb://localhost:27017/";

app.get("/", function (req, res) {
  res.sendFile(__dirname + "/lab_fat.html");
});

app.post("/", function (req, res) {
    var code = req.body.code;
    var name = req.body.name;
    var continent = req.body.continent;
    var iy = Number(req.body.iy);
    var population = Number(req.body.population);
    var gnp = Number(req.body.gnp);
    var hos = req.body.hos;
    var language = req.body.language;
    var official = req.body.official;
    var percentage = Number(req.body.percentage);

    MongoClient.connect(url, function (err, db) {
        if (err) throw err;
        console.log("Connected to Database");
        var dbo = db.db("labfat");
        var r = {
            code,
            name,
            continent,
            iy,
            population,
            gnp,
            hos,
            language,
            official,
            percentage
        }
        dbo.collection('User').insertOne(r, function (err, res) {
            if (err) throw err;
            console.log(res);
            db.close()
        });
    });
})
```

```
> db.labfat.find()
> db.labfat.find()
{ "_id" : ObjectId("61b053243a095c92bfb50bdf"), "code" : "AFG", "name" : "Afghanistan", "continent" : "Asia", "independence_year" : 1919, "population" : 22720000, "gnp" : 5976, "head_of_state" : "Mohammad Omar"
}
{ "_id" : ObjectId("61b053243a095c92bfb50be0"), "code" : "NLD", "name" : "Netherlands", "continent" : "Europe", "independence_year" : 1581, "population" : 15864000, "gnp" : 371362, "head_of_state" : "Beatrix" }
> db.labfat.find()
{ "_id" : ObjectId("61b053243a095c92bfb50bdf"), "code" : "AFG", "name" : "Afghanistan", "continent" : "Asia", "independence_year" : 1919, "population" : 22720000, "gnp" : 5976, "head_of_state" : "Mohammad Omar"
}
{ "_id" : ObjectId("61b053243a095c92bfb50be0"), "code" : "NLD", "name" : "Netherlands", "continent" : "Europe", "independence_year" : 1581, "population" : 15864000, "gnp" : 371362, "head_of_state" : "Beatrix" }
{ "_id" : ObjectId("61b05592b26dd30d0f09586c"), "code" : "IND", "name" : "India", "continent" : "Asia", "independence_year" : 1947, "population" : 2361854651, "gnp" : 515115512, "head_of_state" : "Modi" }
{ "_id" : ObjectId("61b05592b26dd30d0f09586d"), "code" : "Aus", "name" : "Australia", "continent" : "Asutralia", "independence_year" : 1930, "population" : 1451511, "gnp" : 151510, "head_of_state" : "xyz" }
{ "_id" : ObjectId("61b05592b26dd30d0f09586e"), "code" : "FRA", "name" : "France", "continent" : "Europe", "independence_year" : 1610, "population" : 144554450, "gnp" : 3751642, "head_of_state" : "abc" }
{ "_id" : ObjectId("61b05592b26dd30d0f09586f"), "code" : "USA", "name" : "United states of America", "continent" : "North America", "independence_year" : 1712, "population" : 54154000, "gnp" : 451518, "head_of_state" : "Biden" }
{ "_id" : ObjectId("61b05592b26dd30d0f095870"), "code" : "CAN", "name" : "Canada", "continent" : "North America", "independence_year" : 1580, "population" : 515154800, "gnp" : 2110362, "head_of_state" : "pqr" }
{ "_id" : ObjectId("61b05592b26dd30d0f095871"), "code" : "CHI", "name" : "China", "continent" : "Asia", "independence_year" : 1915, "population" : 154541515, "gnp" : 45122, "head_of_state" : "jian" }
{ "_id" : ObjectId("61b05592b26dd30d0f095872"), "code" : "JAP", "name" : "Japan", "continent" : "Asia", "independence_year" : 1852, "population" : 1586000, "gnp" : 27525462, "head_of_state" : "Abe" }
{ "_id" : ObjectId("61b05592b26dd30d0f095873"), "code" : "THA", "name" : "Thailand", "continent" : "Asia", "independence_year" : 1881, "population" : 2462000, "gnp" : 1975152, "head_of_state" : "rst" }
>
```

Lab_fat2.js

```js
const express = require("express");
const bodyParser = require("body-Parser");
const app = express();
app.set("view engine", "ejs");
app.use(bodyParser.urlencoded({ extended: true }));
app.use(express.static("public"));
app.listen(3000, function () {
    console.log("Server is running on port 3000");
});
var MongoClient = require("mongodb").MongoClient;
var url = "mongodb://localhost:27017/";
app.get("/", function (req, res) {
    res.sendFile(__dirname + "/form8.html");
});
var myobj = [
    {
        code: "AFG",
        name: "Afghanistan",
        continent: "Asia",
        independence_year: 1919,
        population: 22720000,
        gnp: 5976.0,
        head_of_state: "Mohammad Omar",
        language: "Pashto",
        official: "T",
        percentage: 59.4
    },
    {
        code: "NLD",
```

```
        name: "Netherlands",
        continent: "Europe",
        independence_year: 1581,
        population: 15864000,
        gnp: 371362.0,
        head_of_state: "Beatrix",
        language: "Dutch",
        official: "T",
        percentage: 95.6
    },
    {
        code: "IND",
        name: "India",
        continent: "Asia",
        independence_year: 1947,
        population: 2361854651,
        gnp: 515115512.0,
        head_of_state: "Modi",
        language: "Hindi",
        official: "T",
        percentage: 97.9
    },
    {
        code: "Aus",
        name: "Australia",
        continent: "Asutralia",
        independence_year: 1930,
        population: 1451511,
        gnp: 151510.0,
        head_of_state: "xyz",
        language: "English",
        official: "T",
        percentage: 71.9
    },
    {
        code: "FRA",
        name: "France",
        continent: "Europe",
        independence_year: 1610,
        population: 144554450,
        gnp: 3751642.0,
        head_of_state: "abc",
        language: "french",
        official: "T",
        percentage: 86.9
    },
    {
        code: "USA",
        name: "United states of America",
        continent: "North America",
```

```
        independence_year: 1712,
        population: 54154000,
        gnp: 451518.0,
        head_of_state: "Biden",
        language: "English",
        official: "T",
        percentage: 99.4
    },
    {
        code: "CAN",
        name: "Canada",
        continent: "North America",
        independence_year: 1580,
        population: 515154800,
        gnp: 2110362.0,
        head_of_state: "pqr",
        language: "English",
        official: "T",
        percentage: 95.2
    },
    {
        code: "CHI",
        name: "China",
        continent: "Asia",
        independence_year: 1915,
        population: 154541515,
        gnp: 45122.0,
        head_of_state: "jian",
        language: "Chinese",
        official: "T",
        percentage: 91.5
    },
    {
        code: "JAP",
        name: "Japan",
        continent: "Asia",
        independence_year: 1852,
        population: 1586000,
        gnp: 27525462.0,
        head_of_state: "Abe",
        language: "Japanese",
        official: "T",
        percentage: 98.7
    },
    {
        code: "THA",
        name: "Thailand",
        continent: "Asia",
        independence_year: 1881,
        population: 2462000,
```

```
        gnp: 1975152.0,
        head_of_state: "rst",
        language: "Thai",
        official: "T",
        percentage: 94.2
    }

];

app.post("/", function (req, res) {
    var n = req.body.name;
    var f = req.body.gnp;
    var c = req.body.population;
    var b = Number(req.body.bida);
    var r = Number(req.body.finddetails);
    MongoClient.connect(url, function (err, db) {
        if (err) throw err;
        dbo = db.db("Assignments");
        var myquery;
        function mymongo(myquery) {
            dbo.collection("labfat").find(myquery).toArray(function (err, res) {
                if (err) throw err;
                console.log(res);
                db.close();
            });
        }
        switch (r) {
            case 1:
                myquery = { name: n };
                mymongo(myquery);
                break;
            case 2:
                myquery = { gnp: f };
                mymongo(myquery);
                break;
            case 3:
                myquery = { population: c };
                mymongo(myquery);
                break;
            case 4:
                myquery = { percentage: { $gte: b } };
                mymongo(myquery);
                break;
        }
    });
});
```