PROBLEM STATEMENT

1. Create a MongoDB database that has a collection of healthcare having different documents (such as hsp_id, hsp_name, hosp_dept, hsp_timings etc)for each hospital. Create a server listening to 8081. Use the POST method to insert document into the database. Query the database to retrieve the newly inserted document.
2. Create a Meal Time module that will take the time (Hint: Use the Date builtin object) and returns if it's breakfast, lunch or dinner time. Export the module in your application to display the mealtime of the day.

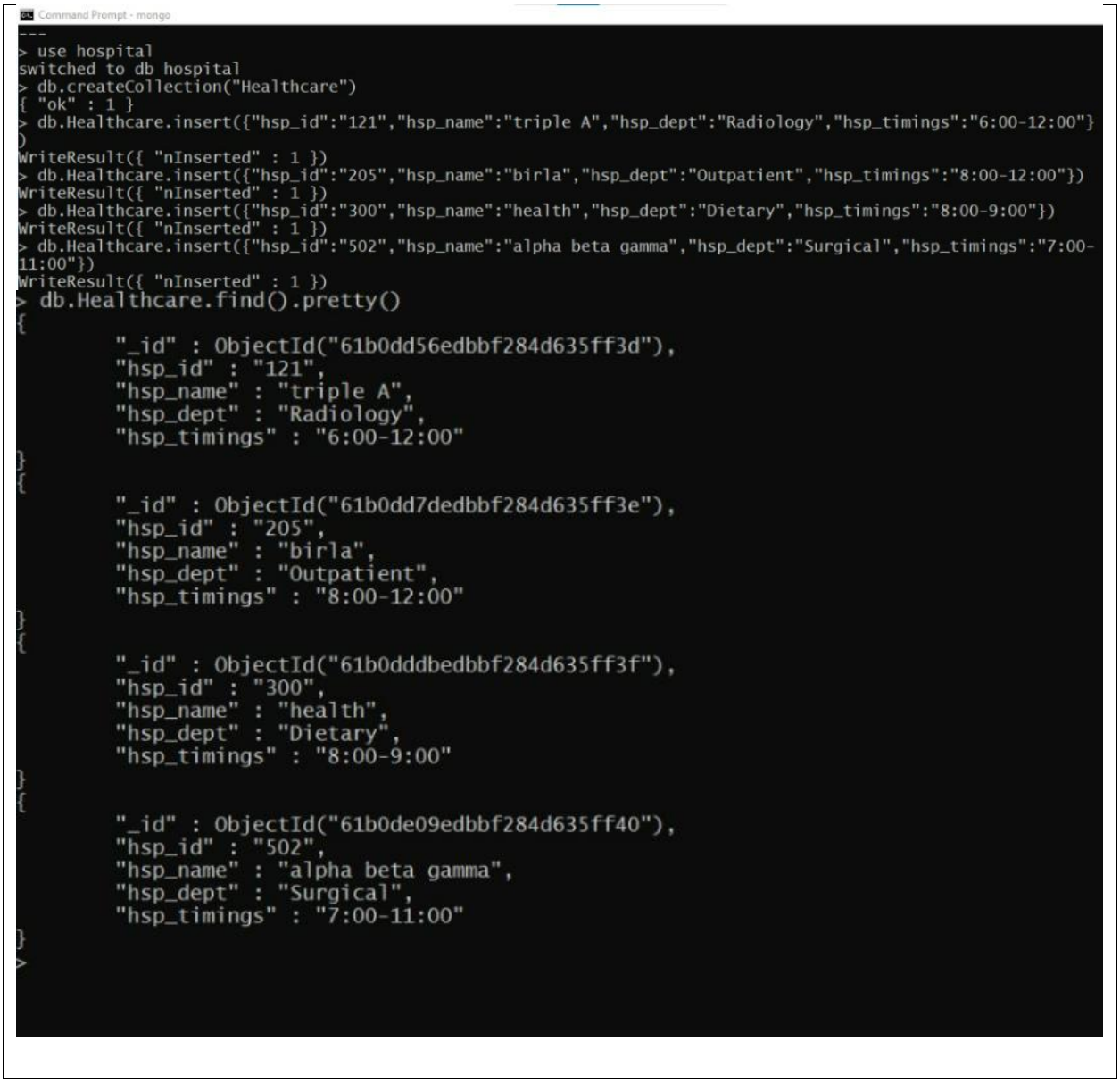
OBJECTIVE

The objective of this exercise is to test the student on NodeJS and MongoDB.It evaluates the student's knowledge of http server creation using Node, Reading from MongoDB and NodeJS MongoDB driver.

PREREQUISITE

In order to complete this exercise, the student needs to understand the fundamentals of HTML,CSS, and JavaScript

DATABASE CREATION


Command Prompt - mongo
> use hospital
switched to db hospital
> db.createCollection("Healthcare")
{ "ok" : 1 }
> db.Healthcare.insert({"hsp_id":"121","hsp_name":"triple A","hsp_dept":"Radiology","hsp_timings":"6:00-12:00"}
)
WriteResult({ "nInserted" : 1 })
> db.Healthcare.insert({"hsp_id":"205","hsp_name":"birla","hsp_dept":"Outpatient","hsp_timings":"8:00-12:00"})
WriteResult({ "nInserted" : 1 })
> db.Healthcare.insert({"hsp_id":"300","hsp_name":"health","hsp_dept":"Dietary","hsp_timings":"8:00-9:00"})
WriteResult({ "nInserted" : 1 })
> db.Healthcare.insert({"hsp_id":"502","hsp_name":"alpha beta gamma","hsp_dept":"Surgical","hsp_timings":"7:00-
11:00"})
WriteResult({ "nInserted" : 1 })
> db.Healthcare.find().pretty()
{
"_id" : ObjectId("61b0dd56edbbf284d635ff3d"),
"hsp_id" : "121",
"hsp_name" : "triple A",
"hsp_dept" : "Radiology",
"hsp_timings" : "6:00-12:00"
}
{
"_id" : ObjectId("61b0dd7dedbbf284d635ff3e"),
"hsp_id" : "205",
"hsp_name" : "birla",
"hsp_dept" : "Outpatient",
"hsp_timings" : "8:00-12:00"
}
{
"_id" : ObjectId("61b0dddbedbbf284d635ff3f"),
"hsp_id" : "300",
"hsp_name" : "health",
"hsp_dept" : "Dietary",
"hsp_timings" : "8:00-9:00"
}
{
"_id" : ObjectId("61b0de09edbbf284d635ff40"),
"hsp_id" : "502",
"hsp_name" : "alpha beta gamma",
"hsp_dept" : "Surgical",
"hsp_timings" : "7:00-11:00"
}
>

PROGRAM 1

Server.js

```
const http = require("http");
const MongoClient = require('mongodb').MongoClient;
http.createServer((req, res) => {
if (req.method === 'GET') {
MongoClient.connect('mongodb://localhost:27017', (err, client) => {
if (err) throw err;
const db = client.db('hospital');
db.collection('Healthcare').find().toArray((err, record) => {
if (err) throw err;
res.writeHead(200, { "Content-Type": "application/json" });
res.write(JSON.stringify(record));
res.end();
client.close();
});
});
}
if (req.method === 'POST') {
const chunks = [];
req.on('data', chunk => chunks.push(chunk));
req.on('end', () => {
const data = JSON.parse(Buffer.concat(chunks).toString());
MongoClient.connect('mongodb://localhost:27017', (err, client) => {
if (err) throw err;
const db = client.db('hospital');
db.collection('healthcare').insertOne(data)
.then(() => {
res.writeHead(200, { "Content-Type": "text" });
res.write('Inserted record!');
res.end();
client.close()
})
});
})
}
}).listen(8081);
```

Client.js

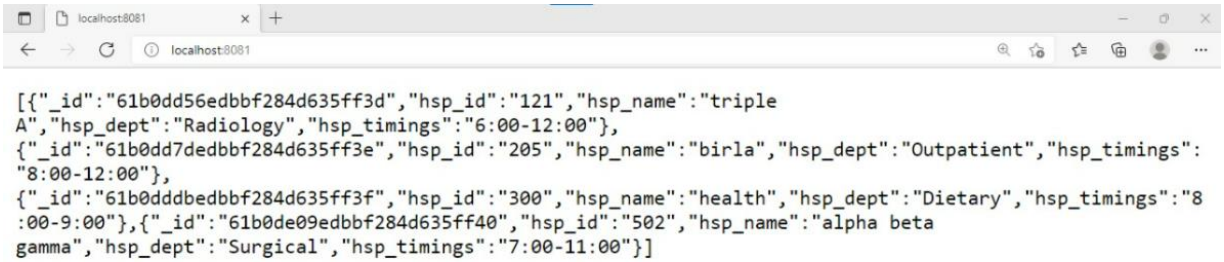
```
const http = require('http');
```

```
getReq();
console.log('');
postReq();
console.log('');
getReq();
function postReq() {
const data = JSON.stringify({ hsp_id: "405", hsp_name: "Humanity",
hsp_dept: "Outpatient", hsp_timings: "6:00-12:00" });
const options = {
hostname: 'localhost',
port: 8081,
method: 'POST',
headers: {
'Content-Type': 'application/json',
'Content-Length': Buffer.byteLength(data)
}
};
const req = http.request(options, res => {
console.log(`statusCode: ${res.statusCode}`);
res.on('data', d => {
process.stdout.write(d);
});
});
req.write(data);
req.end();
}
function getReq() {
http.get('http://localhost:8081', (res) => {
const chunks = [];
res.on('data', chunk => chunks.push(chunk));
res.on('end', () => {
console.log(Buffer.concat(chunks).toString());
});
});
}
```

SCREENSHOT OF YOUR OUTPUT

```
PS D:\pes\sem3\wt\assingments> node ./Sever.js
```

```
PS D:\pes\sem3\wt\assingments> node ./Client.js
[{"_id":"61b0dd56edbbf284d635ff3d","hsp_id":"121","hsp_name":"triple A","hsp_dept":"Radiology","
hsp_timings":"6:00-12:00"},{"_id":"61b0dd7dedbbf284d635ff3e","hsp_id":"205","hsp_name":"birla","
hsp_dept":"Outpatient","hsp_timings":"8:00-12:00"},{"_id":"61b0dddbedbbf284d635ff3f","hsp_id":"3
00","hsp_name":"health","hsp_dept":"Dietary","hsp_timings":"8:00-9:00"},{"_id":"61b0de09edbbf284
d635ff40","hsp_id":"502","hsp_name":"alpha beta gamma","hsp_dept":"Surgical","hsp_timings":"7:00
-11:00"}]
statusCode: 200
Inserted record![{"_id":"61b0dd56edbbf284d635ff3d","hsp_id":"121","hsp_name":"triple A","hsp_dep
t":"Radiology","hsp_timings":"6:00-12:00"},{"_id":"61b0dd7dedbbf284d635ff3e","hsp_id":"205","hsp
_name":"birla","hsp_dept":"Outpatient","hsp_timings":"8:00-12:00"},{"_id":"61b0dddbedbbf284d635f
f3f","hsp_id":"300","hsp_name":"health","hsp_dept":"Dietary","hsp_timings":"8:00-9:00"},{"_id":"
61b0de09edbbf284d635ff40","hsp_id":"502","hsp_name":"alpha beta gamma","hsp_dept":"Surgical","hs
p_timings":"7:00-11:00"}]
```



PROGRAM 2

MealTime.js

```
exports.mealTime = (time = new Date()) => {
const hour = time.getHours();
if (hour > 7 && hour < 10)
return 'Breakfast';
else if (hour > 10 && hour < 18)
return 'Lunch';
else if (hour > 18 && hour < 24)
return 'Dinner';
}
```

WhatMeal.js

```
const mealTime = require('./mealTime')
console.log(mealTime.mealTime())
```

SCREENSHOT OF YOUR OUTPUT

```
PS D:\pes\sem3\wt\assingments> node ./WhatMeal.js
Lunch
PS D:\pes\sem3\wt\assingments>
```