

The following exercises are related to the use of Node/Express and React.

1. Create a git repository for your answers to this problem sheet. Push the repository to GitHub. Make a commit and push it to GitHub after each exercise.
2. In our last React lab we built an Raect application that used components to create and read book data. The final solution to the lab can be found at https://github.com/Data-Rep-MERN-Application/lab_four. Clone this application if you did not finish the application last week. To clone an the application
git clone https://github.com/Data-Rep-MERN-Application/lab_four

to install the required dependencies run :

```
npm install
```

3. Make a new folder in your React App called BackEnd and add a file to that folder called server.js. Develop a Server that uses the Express Framework to returns the following JSON data when a GET request is made to /api/books.

```
{
  books: [
    {
      "title": "Learn Git in a Month of Lunches",
      "isbn": "1617292419",
      "pageCount": 0,
      "thumbnailUrl":
        "https://s3.amazonaws.com/AKIAJC5RLADLUMVRPFDQ.book-thumb-images/umali.jpg",
      "authors": ["Rick Umali"],
      "categories": []
    },
    {
      "title": "MongoDB in Action, Second Edition",
      "isbn": "1617291609",
      "pageCount": 0,
      "thumbnailUrl":
        "https://s3.amazonaws.com/AKIAJC5RLADLUMVRPFDQ.book-thumb-images/banker2.jpg",
      "status": "MEAP",
      "authors": [
        "Kyle Banker",
        "Peter Bakkum",
        "Tim Hawkins",
        "Shaun Verch",
        "Douglas Garrett"
      ],
      "categories": []
    }
  ]
}
```

```

    },
    {
      "title": "Getting MEAN with Mongo, Express, Angular, and Node",
      "isbn": "1617292036",
      "pageCount": 0,
      "thumbnailUrl":
        "https://s3.amazonaws.com/AKIAJC5RLADLUMVRPFDQ.book-thumb-images/sholmes.jpg",
      "status": "MEAP",
      "authors": ["Simon Holmes"],
      "categories": []
    }
  ]
}

```

4. Change the React app to read JSON data from the Node/Express server. You will need to add the following lines to your server to avoid a CORS error.

```

const cors = require('cors');

app.use(cors());

app.use(function(req, res, next) {
  res.header("Access-Control-Allow-Origin", "*");
  res.header("Access-Control-Allow-Methods", "GET, POST, PUT, DELETE, OPTIONS");
  res.header("Access-Control-Allow-Headers",
    "Origin, X-Requested-With, Content-Type, Accept");
  next();
});

```

5. Change the React app so that it now makes a post request to the server (sending a "book" object to the server). Also adding a post method on the Express Server that will console log both the title, year and poster url of the object passed up by the React app. Again the post method should be at /api/book route point on the server.