National Textile University

Department of Computer Science

Subject:

Operating System

Submitted To:

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Submitted By:

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Registration No:

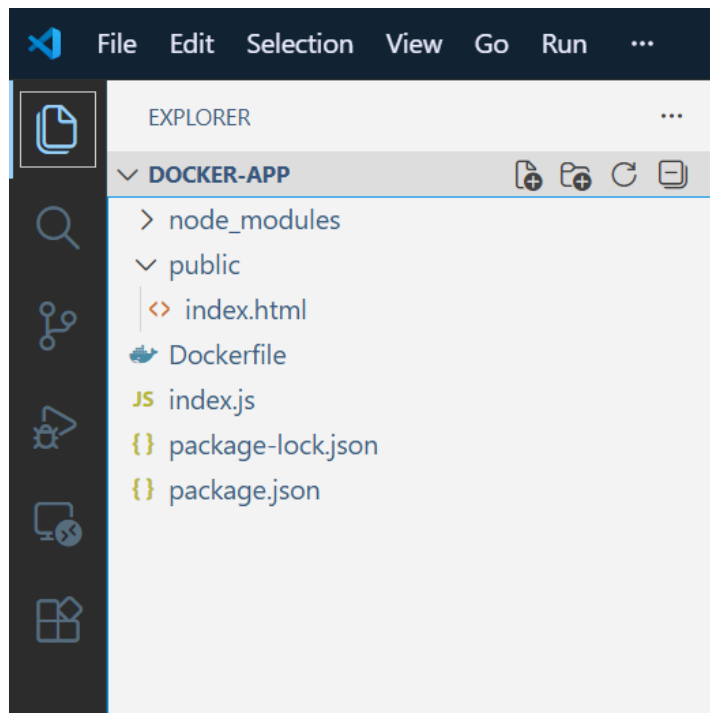**23-NTU-CS-1163**

Lab:

13

Semester:

5th

Practice Exercise: Build Your Own Image

Challenge: Serve static HTML files from our previously build node server!
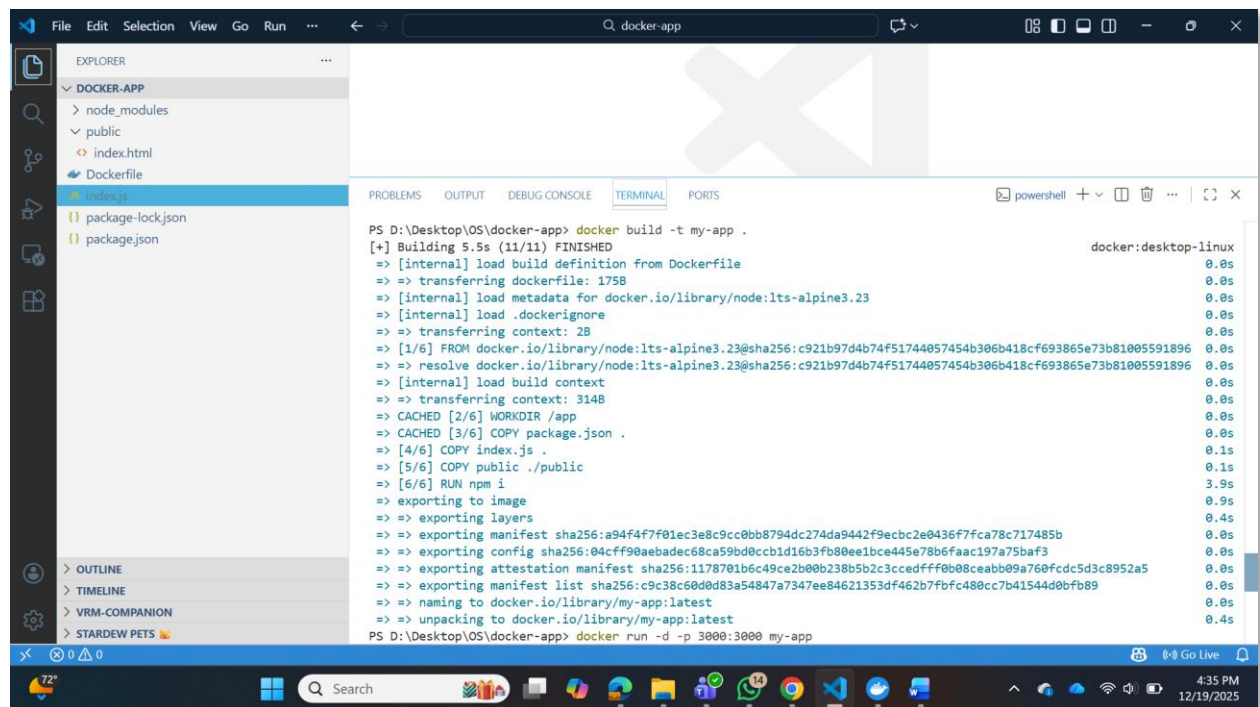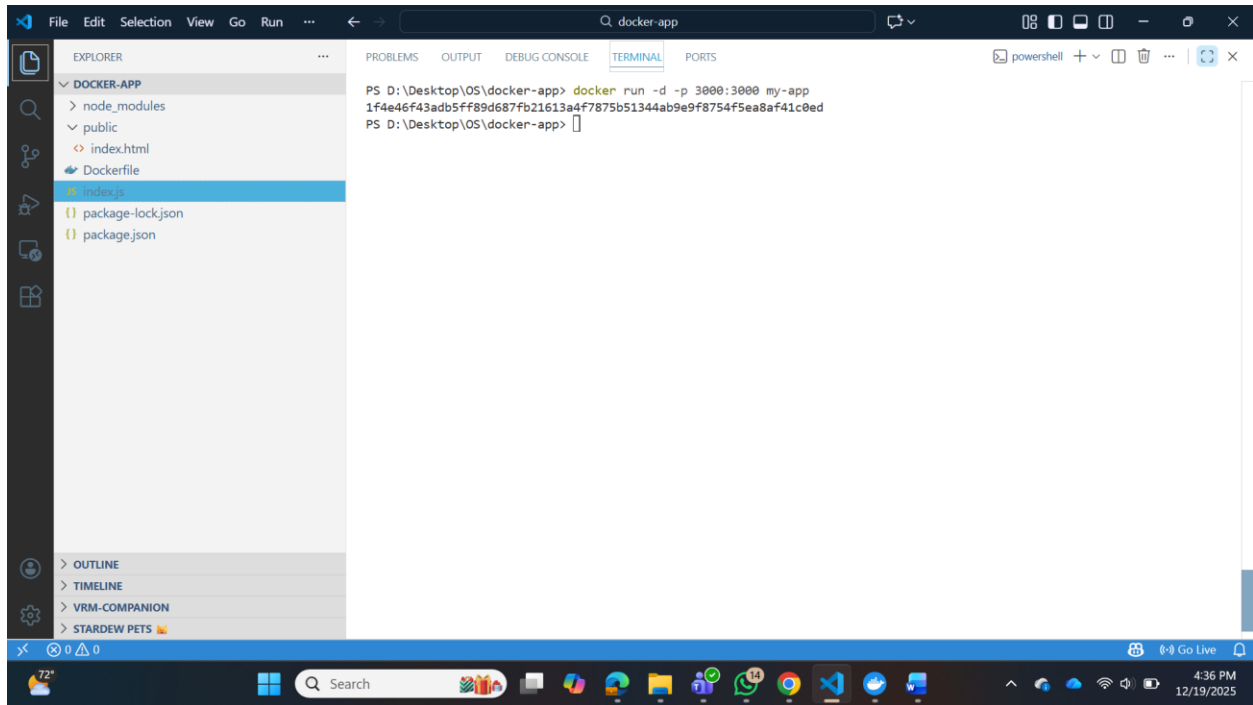
Directory:

Docker File:

```dockerfile
FROM node:lts-alpine3.23
WORKDIR /app
COPY package.json .
COPY index.js .
COPY public ./public
RUN npm i
CMD ["node", "index.js"]
```

Index.js:

```js
import express from 'express';
const app = express();
app.use(express.static('public'));
app.listen(3000, () => {
    console.log('Server running on http://localhost:3000');
});
```
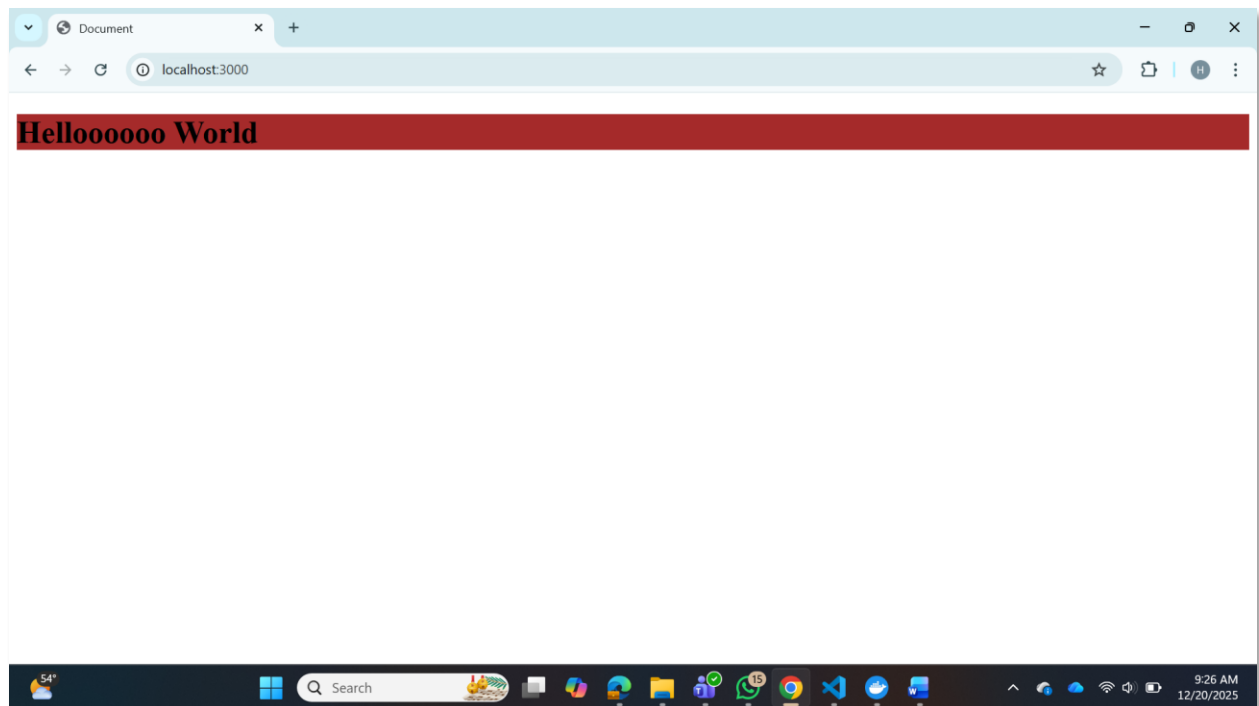
Image Creation:

```
PS D:\Desktop\OS\docker-app> docker build -t my-app .
[+] Building 5.5s (11/11) FINISHED                                                          docker:desktop-linux
 => [internal] load build definition from Dockerfile                                                       0.0s
 => => transferring dockerfile: 175B                                                                       0.0s
 => [internal] load metadata for docker.io/library/node:lts-alpine3.23                                     0.0s
 => [internal] load .dockerignore                                                                          0.0s
 => => transferring context: 2B                                                                            0.0s
 => [1/6] FROM docker.io/library/node:lts-alpine3.23@sha256:c921b97d4b74f51744057454b306b418cf693865e73b81005591896  0.0s
 => => resolve docker.io/library/node:lts-alpine3.23@sha256:c921b97d4b74f51744057454b306b418cf693865e73b81005591896  0.0s
 => [internal] load build context                                                                          0.0s
 => => transferring context: 314B                                                                          0.0s
 => CACHED [2/6] WORKDIR /app                                                                              0.0s
 => CACHED [3/6] COPY package.json .                                                                       0.0s
 => [4/6] COPY index.js .                                                                                  0.1s
 => [5/6] COPY public ./public                                                                             0.1s
 => [6/6] RUN npm i                                                                                        3.9s
 => exporting to image                                                                                     0.9s
 => => exporting layers                                                                                    0.4s
 => => exporting manifest sha256:a94f4f7f01ec3e8c9cc0bb8794dc274da9442f9ecbc2e0436f7fca78c717485b          0.0s
 => => exporting config sha256:04cff90aebadec68ca59bd0ccb1d16b3fb80ee1bce445e78b6faac197a75baf3            0.0s
 => => exporting attestation manifest sha256:1178701b6c49ce2b00b238b5b2c3ccedfff0b08ceabb09a760fcdc5d3c8952a5  0.0s
 => => exporting manifest list sha256:c9c38c60d0d83a54847a7347ee84621353df462b7fbfc480cc7b41544d0bfb89     0.0s
 => => naming to docker.io/library/my-app:latest                                                          0.0s
 => => unpacking to docker.io/library/my-app:latest                                                       0.4s
PS D:\Desktop\OS\docker-app> docker run -d -p 3000:3000 my-app
```

Output:

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