**Assignment 2**

**Step1: Create new Node/Express app as follow:**

**• Create new folder named “Asn2-yourname”.**

**• Change directory to “Asn2-yourname”:**

**• Open terminal and run npm init**

* **In the terminal run: npm install express –save**

**• In the terminal run: npm install express-handlebars –save**

**• Make sure to have the following project structure**

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**Step2: Using the attach file (codenippet.txt), copy/paste the related code to “style.css”,“main.hbs”, “index.hbs”, “error.hbs” and “app.js”.**

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**Step 3: Run the application and test it using the following routes:**

<http://localhost:3000/>

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<http://localhost:3000/users>

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<http://localhost:3000/notExist>

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**Step 4: Base on your observation, answer the following questions:**

1. **What is the role of “main.hbs”? How does it being used/called in the app?**

**Ans :- Use of main.hbs file to render that title and p tag of index.hbs file . After passing get request call request on url ‘/ ‘ then it will render index.hbs file and title is already given in url and after render index.hbs file , it will pass data to main.hbs file and main.hbs file is responsilble to render template of html file .**

1. **What is the role of “index.hbs” and “error.hbs”? How do these files being used/called inthe app?**

**Ans :- Role of main and error . hbs file is to use data which is present in app.js file and later both files templates will be rendered by main.hbs file .**

1. **In “app.js”, what is the role of the following line? What happen if you commend it out**

**Ans :- Role of following line to get to public folder and to access css files .And css files is liked to main.hbs file , so if we comment out that line then we cannot see styling effects which we passed on style.css file .**

1. **Try to add proper comments to each line/block in app.js**
2. // Require  modules
3. var express = require('express'); // Import Express
4. var path = require('path'); // Import Node.js path module
5. var app = express(); // Create an instance of Express.js application
6. const exphbs = require('express-handlebars'); // Import Express Handlebars for template rendering
7. // Set the port number, either from environment variable or default to 3000
8. const port = process.env.port || 3000;
9. // Serve static files from the 'public' directory
10. app.use(express.static(path.join(\_\_dirname, 'public')));
11. // Configure Express to use Handlebars as the view engine
12. app.engine('.hbs', exphbs.engine({ extname: '.hbs' }));
13. app.set('view engine', 'hbs');
14. // Define route handling for the root URL
15. app.get('/', function(req, res) {
16. // Render the 'index' template with dynamic data (title: 'Express')
17. res.render('index', { title: 'Express' });
18. });
19. // Define route handling for the '/users' url
20. app.get('/users', function(req, res) {
21. // Send a response with the message 'respond with a resource'
22. res.send('respond with a resource');
23. });
24. // Define a route for any other URL
25. app.get('\*', function(req, res) {
26. // Render the 'error' template with dynamic data (title: 'Error', message: 'Wrong Route')
27. res.render('error', { title: 'Error', message:'Wrong Route' });
28. });
29. // Starting the Express.js server which is  listening on the port specified
30. app.listen(port, () => {
31. console.log(`Example app listening at http://localhost:${port}`)
32. })

**Step 5: Modify the layout of the page and add “header”, “content” and “footer” as follow**.

• Add your name/std\_id to the header

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• Add your email address to the footer

• The other dynamic contents/messages should be displayed in the “content” area.

• Use your creativity to add proper css style/format. Add(hint: you need to redesign main.hbs and style.css)

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**Step 6: Add the Assignment1 code into this template. So the assignment1 form and outputshould be displayed in the content area of the layout.• For each of the route in assignment 1 (like /data, /data/product, /search/prdID, ...), youneed to create a related “page” in “/views” folder. So, when the “app.get” of the relatedroute is called, you gonna use the proper “res.render(‘page’, {data})”. (hint: use similarideas like index.hbs) Moreover, you also should redesign the way that you generateoutput in Assingment2 by displaying the output using Handlebars expression/helpers.**

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**Step 7: Design a new route “/allData” to display all books info in html table output usinghandlebars helpers/expression**

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**Step 8: Modify Step 7 by removing/notShowing those products which their “"reviews" is zero(hint: use “#if” helper ☺**

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**Step 9: Design a custom helper for changing "reviews": “0” to “N/A”. Apply this on Step7&8 inorder to display all products data but highlight those rows that their "reviews" is zero!**

**Step 10: Use your creativity to implement the followings: You want to change table row color for those records which "reviews" is zero. Try toimplement it using Template Engine.**

**Combination of step 9 and 10**

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**In this app, do you find any use cause for utilizing “Partial” Templates?**

Ans :- Concerning utilization of partial layouts, they can be gainful in situations where you have redundant HTML code that you need to reuse across different perspectives. For instance: Header and Footer: On the off chance that you have a typical header and footer that show up on each page of your application, you can make halfway layouts for these segments and remember them for each view. This keeps up with consistency and decreases code duplication. Reusable Parts: On the off chance that there are sure UI parts (e.g., an item card, a route menu) that are utilized in various spots all through your application, you can make fractional layouts for these parts and incorporate them any place required.