Era Solutions RAP Exit Exam

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Personal Information: We collect personal data such as names, email addresses, and academic affiliations solely for the purpose of exam registration, communication, and identification.

Exam Responses: Responses to both the individual project and algorithmic assessments are collected for evaluation purposes. This includes any code, written answers, or project submissions.

Usage Data: We may collect data on how the examination platform is accessed and used, such as time spent on questions, login times, and technical details about device and network.

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Your Rights

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Complaints: If you have any concerns about how we handle your data, please contact us directly.

Changes to This Privacy Statement

Era Solutions reserves the right to update this privacy statement at any time. When we do, we will revise the updated date at the bottom of this page. We encourage users to frequently check this page for any changes.

Contacting Us

If you have any questions about this Privacy Statement, the practices of this exam administration, or your dealings with Era Solutions, please contact us at: d.ken@erasolutions.us

Effective as of 8/27/2024

First Name:	Last Name:	Apprenticeship Group # :	Phone:
Yue	Mao	3	2672559819

1A. Project Title: E-commerce Site

1B. Project Description:

1C. Key Components:

Scope and Theme Definition:

The e-commerce site will provide a complete shopping experience for custome

Technology Stack:

React, React Router, Tailwind Css, Express, MongoDB

User Interface Design:

Tailwind CSS

Functionality and Features:

User registration, login, and profile management for both customers and seller

API Integration:

REST APIs are used in this project to handle communication between the front

Testing and Deployment:

Used Vercel to deploy my project

Documentation:

live site: https://www.yuescollection.com/ live site (admin): https://yuescollecti

1D. Deadlines:

The individual project will be due on_____on your GitHub.

Algorithm testing will commence on_____on HackerRank.com.

1E. Technical Specifications

1. **Project Overview:**

Description:

Provide a brief overview of what the project is about.

The app provides a robust e-commerce platform where customer

State the purpose and the intended audience for the project.

This e-commerce platform provides a seamless shopping experie

Goals/Objectives:

List the primary objectives and what the project aims to achieve.

This project aims to create a user-friendly marketplace that provic

Describe the key functionalities and features you plan to implement.

User registration and login for buyers. Adding items to cart, makin

2. **Technology Stack:**

Frontend:

Specify the languages you will use (like HTML, CSS, JavaScript).

Javascript, jsx, HTML, CSS

List any frameworks or libraries (such as React, Angular, Vue.js).

React, Tailwind CSS, Express, MongoDB, Stripe, Axios, Toastify

Mention any additional tools (SASS, Webpack, etc.).

Backend:

Indicate the programming languages (Python, Java, Node.js, etc.).

Javascript with JSX

Name the frameworks you will be utilizing (Express.js, Django, Spring Boot, etc.).

Express.js

Describe your API design approach (RESTful, GraphQL).

REST APIs to handle communication between the frontend and b

Database:

Choose between SQL or NoSQL and specify the system (MySQL, PostgreSQL, MongoDB, etc.).

MongoDB

Additional Technologies:

List any external APIs you plan to integrate.

Stripe

Mention if you will use cloud services or other specific libraries or tools.

Toastify

3. **User Interface and Experience:**

Design Principles:

Discuss your approach to responsive design and accessibility standards.

Tailwind CSS classes allow for precise control at different breakpc

Outline your plan for the user interaction flow.

Home page, product browsing, shopping cart, checkout, contact,

Wireframes/Mockups:

If you have already created basic layout designs, describe them briefly.

The layout is very minimalistic.

4. **Tools and Frameworks:**

Specify the testing tools and frameworks you will be using.

React, tailwind css, react router

5. **Performance and Optimization:**

Caching Strategies:

Cache successful responses from the backend when logging in o

Explain your plan for browser caching and server-side caching.

Store assets and data locally in the user's browser to reduce load

6. **Optimization Techniques:**

Discuss techniques like code minification, image optimization, and load balancing.

Code minification, image optimization, and load balancing are app

7. **Deployment and Maintenance:**

Deployment Platform:

State which hosting service you will use (AWS, Heroku, Azure, etc.).

Vercel

Describe your CI/CD setup, if any.

8. **Evaluation Criteria:**

Evaluation Rubric	
Functionality	30%
Code Quality	30%
User Experience	10%
Innovation and Creativity	10%
Presentation and Documentation	20%

Apprentices must score a minimum of 80% average between the two evaluators to pass the 1st part of the exit examination.

2A. Algorithms: 2-Part Series

2B. Easy Algorithm Test (Based on the list in 2D. Compilation of Examination Questions)

Introduction: This test is designed to assess your problem-solving skills through one of the following algorithms in 2D. Compilation of Examination Questions. The test will be proctored by 2 internal developers.

Task: You can choose any programming you are comfortable with.

Execution: Your solution must focus on the assigned algorithmic problem.

Assessment: Your solution should effectively solve the algorithm and pass ALL test cases using brute force or most optimal. Focus on accuracy, efficiency, and clarity in your code.

2C. Medium Difficulty Algorithm Test (Random Medium-Difficulty Question on HackerRank/LeetCode)

Introduction: The second part involves a medium-difficulty algorithm. You are required to explain the process and solve all test cases using either brute force or most optimal. This test will be proctored by 2 internal developers

Task: You'll be presented with a more complex algorithmic problem, like implementing sorting algorithms, graph traversal, etc.

Expectation: Focus on explaining the steps of the algorithm, its logic, and the approach you would take to solve the problem. You must pass all test cases using either brute force or most optimal.

Assessment: Your explanation and code will be evaluated for clarity, understanding of the algorithm, logical approach, and problem-solving methodology.

Feedback: During this algorithm assessment you may receive feedback and are limited to 3 helpful hints total from the evaluators.

Conclusion: The assessment aims to gauge your problem-solving skills and understanding of algorithms as well as preparing you for technical interviews in the software development industry. Reflect on the feedback provided to enhance your skills further.

2D. Compilation of Examination Algorithms

2D Array
https://www.hackerrank.com/challenges/2d-array/problem
2D Array 2
https://www.hackerrank.com/challenges/array-left-rotation/problem
HashMap:
https://www.hackerrank.com/challenges/two-strings/problem?isFullScreen=true&h_l=interview&playlist_slugs%5B%5D=interview-preparation-kit&playlist_slugs%5B%5D=dictionaries-hashmaps
String
https://www.hackerrank.com/challenges/alternating-characters/problem?isFullScreen=true&h_l=interview&playlist_slugs%5B%5D=interview-preparation-kit&playlist_slugs%5B%5D=strings
String 2
https://www.hackerrank.com/challenges/ctci-making-anagrams/problem?isFullScreen=true&h_l=interview&playlist_slugs%5B%5D=interview-preparation-kit&playlist_slugs%5B%5D=strings
BST
https://www.hackerrank.com/challenges/binary-search-tree-insertion/problem
Tree
https://www.hackerrank.com/challenges/tree-huffman-decoding/problem
Graph
https://www.hackerrank.com/challenges/primsmstsub/problem
String manipulation 2
https://www.hackerrank.com/challenges/sherlock-and-anagrams/problem
Big Sorting
https://www.hackerrank.com/challenges/big-sorting/problem?isFullScreen=true
Insertion Sort
https://www.hackerrank.com/challenges/insertionsort1/problem?isFullScreen=true
Insertion Sort 2
https://www.hackerrank.com/challenges/insertionsort2/problem?isFullScreen=true
Correctness and the Loop Invariant
https://www.hackerrank.com/challenges/correctness-invariant/problem?isFullScreen=true
Running Time of Algorithms
https://www.hackerrank.com/challenges/runningtime/problem?isFullScreen=true

Quicksort 1
https://www.hackerrank.com/challenges/quicksort1/problem?isFullScreen=true
Counting Sort 1
https://www.hackerrank.com/challenges/countingsort1/problem?isFullScreen=true
Counting Sort 2
https://www.hackerrank.com/challenges/countingsort2/problem?isFullScreen=true
Full Count Sort
https://www.hackerrank.com/challenges/countingsort4/problem?isFullScreen=true
Closest Numbers
https://www.hackerrank.com/challenges/closest-numbers/problem?isFullScreen=true
Finding the Median
https://www.hackerrank.com/challenges/find-the-median/problem?isFullScreen=true

The 2nd part of the exam is either pass or fail. You must pass all test cases using brute force or most optimal. There is no minimum score.

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Era Solutions staff will fill out the section below.

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I evaluated_____ on _____.

Last Name, First Name DATE

Member (has/has not) completed the exit examination with a 80% or higher.

_____
Software Developer
Era Solutions, LLC

_____
Director of Software Development
Era Solutions, LLC

_____
Human Resources Manager
Era Solutions, LLC