Improvement Report

Test Bank

Components Developed:

1. Case Study Simulation
    - Created interactive case study scenarios
    - Developed simulation interface for user interaction
    - Built decision-making pathways for different user choices
2. Interactive Exercises
    - Designed hands-on learning activities
    - Created step-by-step problem-solving modules
    - Implemented immediate feedback mechanisms
3. Knowledge Tests
    - Developed assessment modules with scoring system
    - Created multiple question formats (multiple choice, true/false, matching)
    - Built progress tracking and results display

New design:

Main page: https://lexue.bit.edu.cn/course/view.php?id=16945&section=34

https://lexue.bit.edu.cn/mod/quiz/view.php?id=514878

https://lexue.bit.edu.cn/mod/url/view.php?id=513390

https://lexue.bit.edu.cn/mod/url/view.php?id=513391

https://lexue.bit.edu.cn/mod/url/view.php?id=513398

https://lexue.bit.edu.cn/mod/url/view.php?id=513399

https://lexue.bit.edu.cn/mod/url/view.php?id=513400

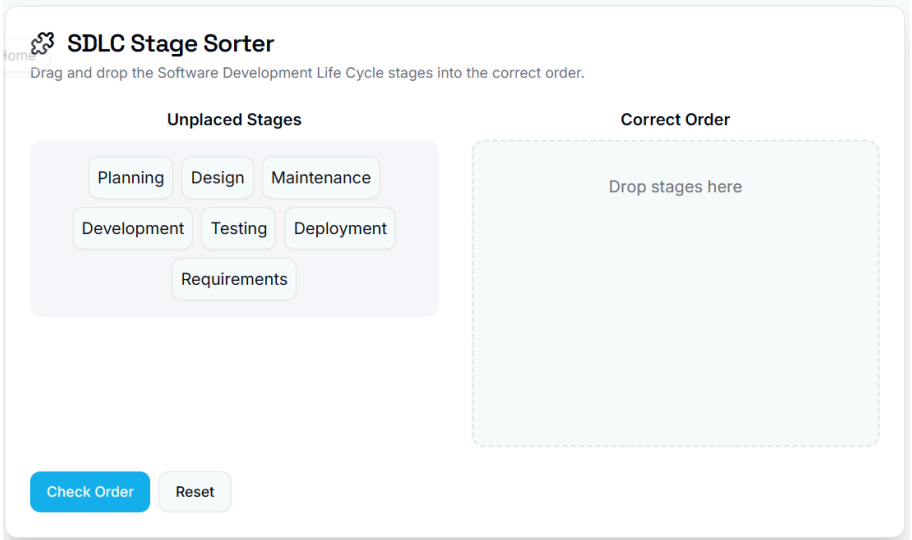
https://lexue.bit.edu.cn/mod/url/view.php?id=513392

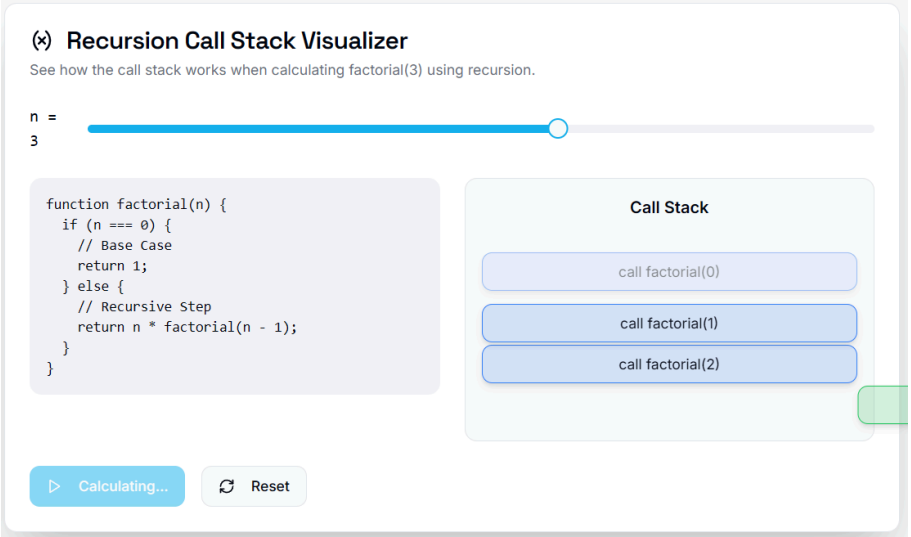
https://lexue.bit.edu.cn/mod/url/view.php?id=513403

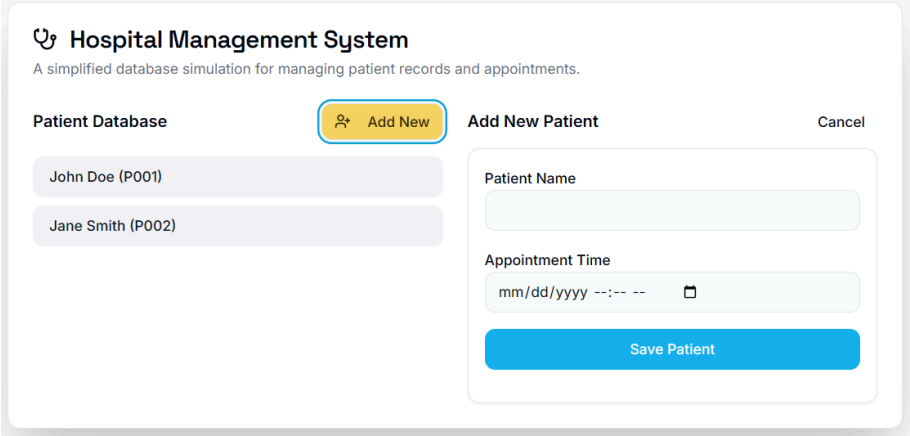
https://lexue.bit.edu.cn/mod/hvp/view.php?id=515209

https://lexue.bit.edu.cn/mod/hvp/view.php?id=513365

Case Study Simulation [Website/haven’t published]







E-commerce Platform Simulation

Explore how an e-commerce site works, including adding items to a cart and seeing personalized recommendations.

Products

Stylish Sneakers

$79.99

Add to Cart

Wireless Headphones

$129.99

Add to Cart

Modern Backpack

$59.99

Add to Cart

Secure Banking App

A simple simulation of a mobile banking app, focusing on secure login and basic transactions.

Username

user123

Password

••••••••

Log In

Food Delivery System

Simulates the real-time order tracking of a food delivery app, powered by cloud services and APIs.

Your Order Status

- Order Placed
- Restaurant is Preparing
- Rider is on the way
- Delivered

Tracking Order...

Logic Gate Simulator

Experiment with basic logic gates, the building blocks of digital circuits. Change the inputs and the gate type to see the output.

Input A

Input B

XOR

Output

0

Simple Expert System

Diagnose a simple ailment based on symptoms using a set of IF-THEN rules. This mimics a basic medical expert system.

Select Symptoms (Facts)

- [x] Persistent Cough
- [ ] Fever
- [x] Fatigue
- [x] Headache

Run Diagnosis

Reset

Diagnosis Result

Migraine

Reasoning:

- System matched the following symptoms: Headache, Fatigue.

Search Algorithm Visualizer

Visualize how Breadth-First Search (BFS) and Depth-First Search (DFS) explore a maze to find the goal.

Breadth-First Search (BFS) | Run Simulation | Reset

Start End Wall Visited Path

Legal Reasoning Simulator

Determine voting eligibility by applying legal statutes as logical IF-THEN rules.

Set the Facts

- [x] Is a Citizen?
- [ ] Is Registered to Vote?

Age: 17

Conclusion

Ineligible to Vote

Reasoning Steps:

- ✓ Person IS a citizen.
- ✗ Person is 17 years old, which is less than 18.

Evaluate | Reset

Fraud Detection System

A hybrid system where a software layer processes transactions and a symbolic AI layer applies fraud-detection rules.

Incoming Transactions

Amount: $50.25	**Location:** Local	**Time:** Normal
Transaction appears normal.		
Amount: $6500.00	**Location:** Local	**Time:** Normal
Flagged: High transaction amount for a local transfer.		
Amount: $120.00	**Location:** Local	**Time:** Normal
Transaction appears normal.		
Amount: $250.00	**Location:** International	**Time:** Normal
Transaction appears normal.		
Amount: $300.50	**Location:** International	**Time:** Odd Hours
Flagged: Unusual international activity during odd hours.		

Run Fraud Detection Rules