

I understand you'd like a detailed prompt for Replit Agent to create a predator-prey simulation (Lotka-Volterra model) with rabbits and foxes, including visualization. Here's a comprehensive prompt you can use:

"Create a web application that simulates and visualizes a Lotka-Volterra predator-prey system featuring rabbits and foxes. The application should:

Core Features:

1. Implement a mathematical model where:
 - Rabbits reproduce at a constant rate
 - Rabbits die when eaten by foxes
 - Foxes reproduce proportionally to how many rabbits they eat
 - Foxes die at a constant rate without food
 - Use standard Lotka-Volterra differential equations

Visualization Requirements:

1. Create a main chart showing:
 - Population of rabbits over time (blue line)
 - Population of foxes over time (red line)
 - X-axis: Time in months
 - Y-axis: Population counts
 - Interactive tooltip showing exact values
2. Add simulation controls:
 - Start/Pause button
 - Reset button
 - Sliders for key parameters:
 - Initial rabbit population (default: 100)
 - Initial fox population (default: 20)
 - Rabbit birth rate (default: 0.4)
 - Fox death rate (default: 0.4)
 - Predation rate (default: 0.02)
 - Fox reproduction efficiency (default: 0.02)
3. Include a simple animation:
 - Basic icons or sprites representing rabbits and foxes
 - Population counts should update in real-time

Technical Specifications:

- Use React for the frontend
- Implement differential equations using numeric integration (Runge-Kutta method preferred)
- Use Recharts or Chart.js for graphing
- Style with Tailwind CSS
- Make it responsive for different screen sizes

Additional Features:

- Add a phase space plot (rabbit population vs fox population)
- Include an information panel explaining the model
- Show current population stats in real-time
- Add ability to export simulation data as CSV

The UI should be clean and intuitive, with a nature-themed color scheme (greens, browns, and earth tones). Make sure to handle edge cases like population extinction and extremely large populations.

Please generate this complete application with proper error handling and documentation."

Would you like me to explain any part of this prompt in more detail or modify any aspects of it?