

## Subject web application: check24online

Check24online is a small web application, containing one java servlet. It allows users to enter four integer values between 1 and 24 inclusive. It will return all possible expressions using the four operators +, -, \*, and / that use each value exactly once and that have the result 24. This is similar to the basic game of 24.

### Specific requirements

#### Functional requirements

<b>Use Case Name:</b> check24online
<b>Use Case ID:</b> check24online-1
<b>Actors:</b> web user
<b>Brief Description:</b> The system accepts four integer values between 1 and 24 inclusive and return all expression using the four operators +, -, *, and / that use each value exactly once and that have the result 24.
<b>Pre-Conditions:</b> None
<b>Main Flow of Events:</b> <ol style="list-style-type: none"><li>1. User enters four integer values between 1 and 24 inclusive.</li><li>2. User presses the 'Check 24' button.</li><li>3. The system displays all expressions using the four operators +, -, *, and / that use each value exactly once and that have the result 24.</li></ol>
<b>Post-Conditions:</b> The system displays all expressions that have the result 24.
<b>Alternative Flows and Exceptions:</b> Alternative 1, Insert Point Step 1 If the web user enters one or more non-numeric values, the system displays an error message.  Alternative 2, Insert Point Step 1 If the web user does not enter all four values, the system displays an error message.  Alternative 3, Insert Point Step 2 If the web user selects the 'Clear Form' button, the system resets the form and clears all previous expressions.
<b>Assumptions:</b> None.