Quick Start Guide

When the program is opened, this is the first screen that the user will see:

Mainscreen:
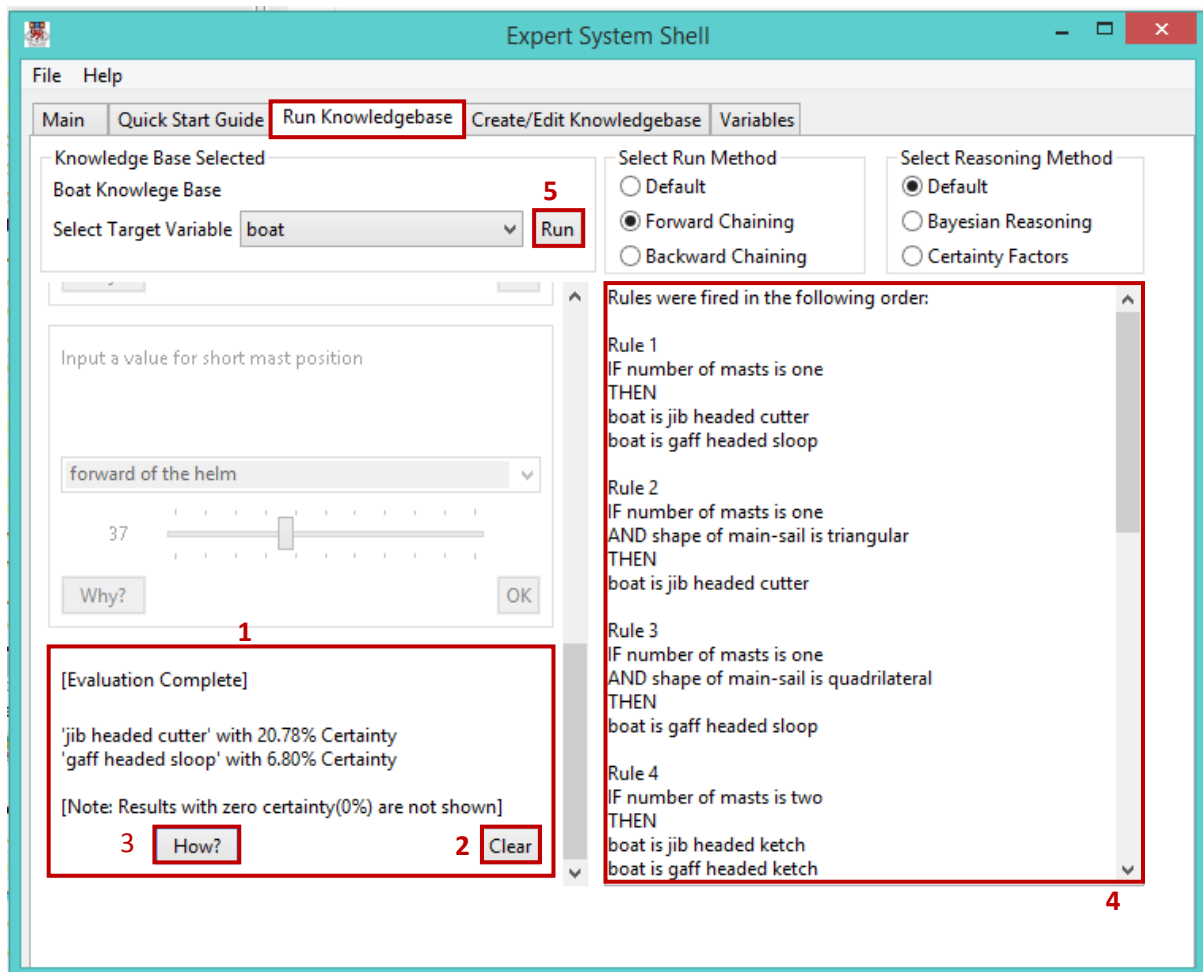

1- This field displays which Knowledge-Base is currently loaded (in this case no Knowledge-Base is loaded).

2-
    a. 'Load…' loads an existing Knowledge-Base. Pressing this button opens a directory to choose your Knowledge-Base from a .kb file type.

    b. 'Edit' allows the user to edit or create a Knowledge-Base. This will open two tabs, both the Create/Edit Knowledge-Base tab and the Variables tab.

    c. Pressing the 'Run' button opens the 'Run Knowledge-Base' tab. From here the user can run the selected Knowledge-Base.

3- To create a new Knowledge-Base, enter the name of the Knowledge-Base into this field and press the 'Create New' button.

Running Knowledgebase Interface:

Once the user has proceeded to the Run Knowledgebase interface, the name of the loaded knowledgebase will be displayed in the top left corner of the screen. To run this knowledgebase, the user should follow the steps listed below.

1- Select a target variable/value from the drop down menu;
2- Select a run method;
3- Select a reasoning method;
4- The expert system asks the user for any information required;
5- Select a value for the answer to the current question out of the possible options;
6- If a certainty factor is required, this slider will appear for the user to set the value;

7- Press the why button to display the rule the expert system is trying to evaluate in section 8;
8- Displays the current rule that the program is trying to evaluate;
9- Once all information is added, click ok to continue the evaluation process. More questions may appear if required by the expert system;
10- The stop button doubles as a run button. Run the program to start the evaluation process, or stop if you wish not to complete the calculation and reset.
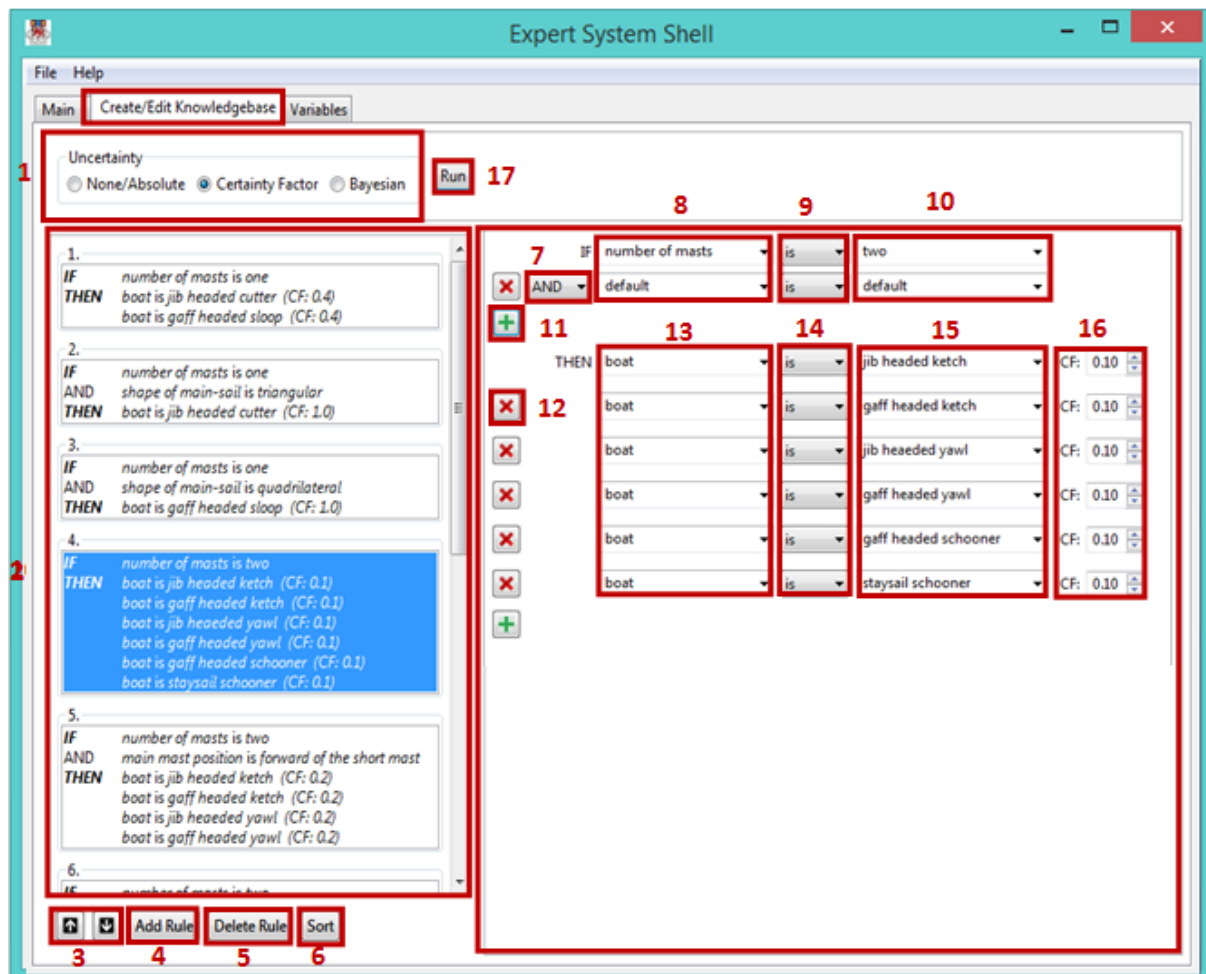
When the evaluation process is complete, the Run Knowledgebase interface will look as shown below.

1- The results of the evaluation will appear in the box;
2- The clear button will clear the current evaluation;
3- Press the how button to display the rules that were evaluated in 4 to reach the results displayed in 1;
4- Displays how the results were determined;
5- The run button will clear the current evaluation and re –run from the start of the evaluation process.

Create/Edit Knowledgebase Interface:

Once the user has proceeded to the Create/Edit Knowledgebase interface, the user can create/edit rules within the knowledgebase. The editor interface looks as follows:

1. Choose an uncertainty method for this knowledgebase;
2. Displays the list of rules within the knowledgebase – select rule to edit;
3. Up and Down arrows allow the user to rearrange rules;
4. Add a new rule with this button;
5. Delete a rule with this button;
6. Sort the rules by "most specfic first" conflict resolution method;
7. Select AND/OR depending on type of rule;
8. Select/create antecedent Variables;
9. Select from numerous linguistic and numeric operators depending on rule type;
10. Select/create antecedent values;
11. Add new antecendent/consequent;
12. Delete antecendent/consequent;
13. Select/create consequent Variables;
14. Select from numerous linguistic and numeric operators depending on rule type;
15. Select/create consequent values;
16. Depending on uncertainty method chosen, either CF for Certainty Factors, LN/LS/Prior for Bayesian, or nothing for None/Absolute will appear. Fill in as required;
17. Switch to Run Knowledgebase Interface.

Variables Interface:

The variables tab opens when the user selects to create/edit a knowledgebase and allows the user to personalise the variables associated with the selected knowledgebase. The variables interface looks as follows:

1- Displays the list of variables in the current knowledgebase;
2- Edit the variable name ;
3- Add a description to the variable;
4- Question prompt- Ask a unique question, e.g. How is the weather today? The Expert System Shell will ask the default question if nothing is entered here;
5- Displays the possible values the variable could take. These values will appear in a drop down menu when asking the user for the value of the variable in Run Knowledgebase. The user cannot add to this list in this interface, and the value "unknown" will be automatically added to each variable in the drop down menu during an evaluation process;
6- Select whether or not the expert system requires user input for this variable, and thus whether a question needs to be asked;
7- Any changes made to this interface will not change the knowledgebase until save is pressed.