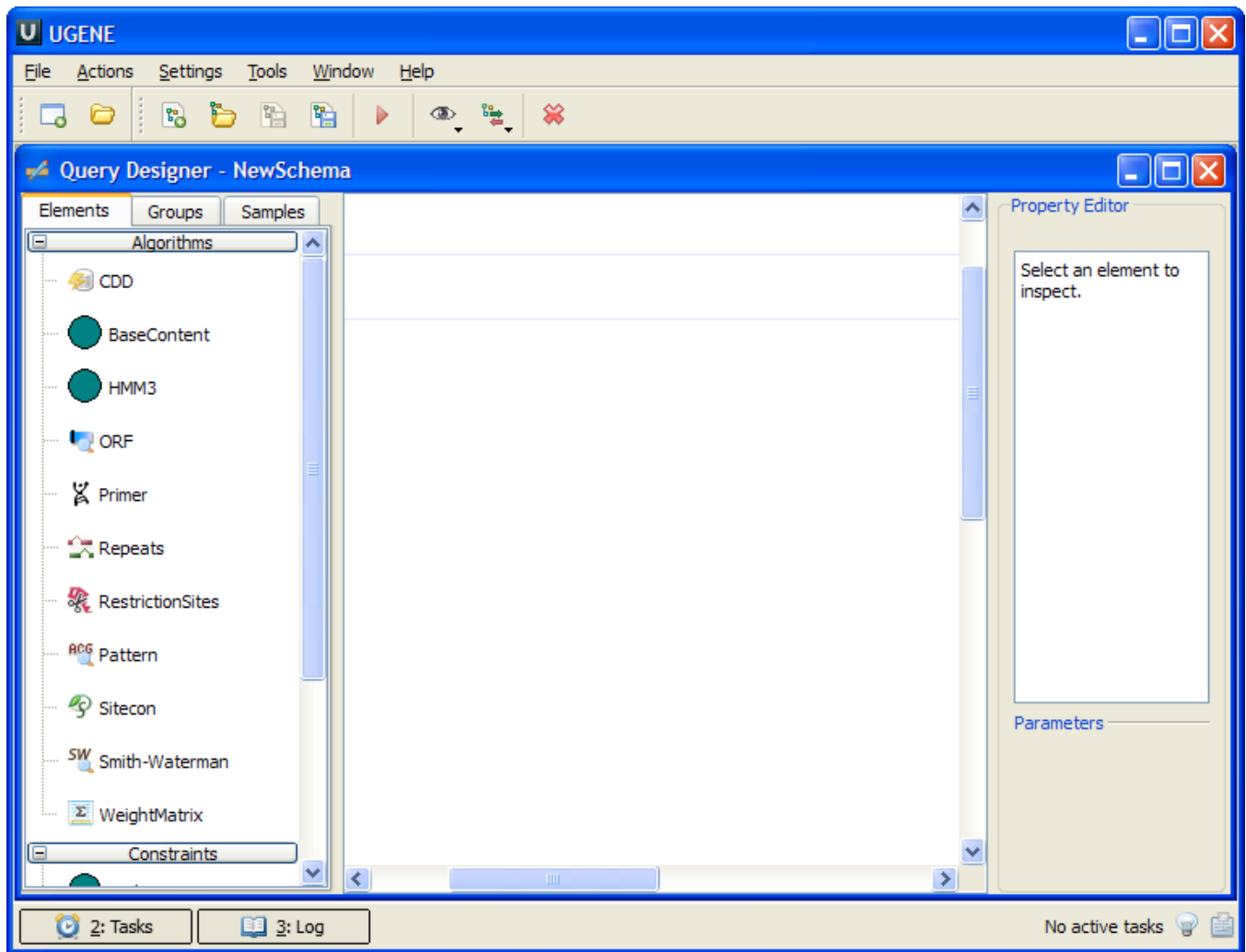


How to Create and Run Schema

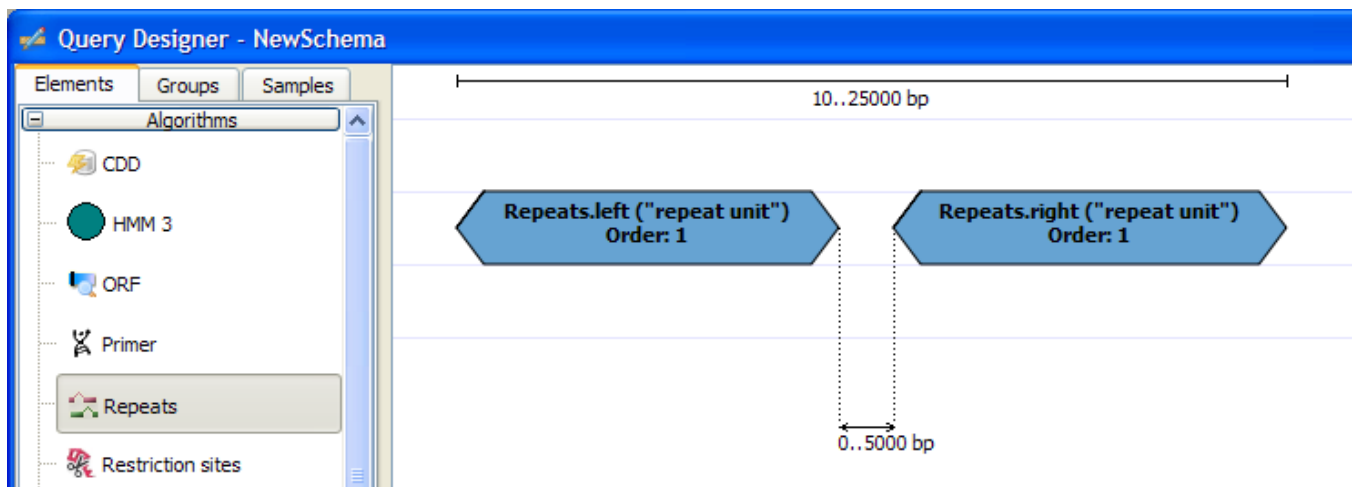
- Select the *Tools Query Designer* item in the main menu.

Result: The Query Designer window appears:



- Drag the *Repeats* element from the *Palette* to the *Scene*.

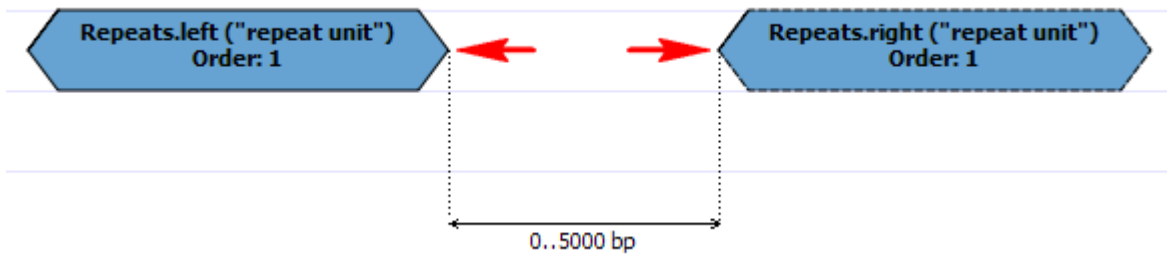
Result: The *Repeats* element subunits are presented on the *Scene*:



Note, that by default minimum distance between left and right repeats is 0bp, the maximum distance is 5000bp.

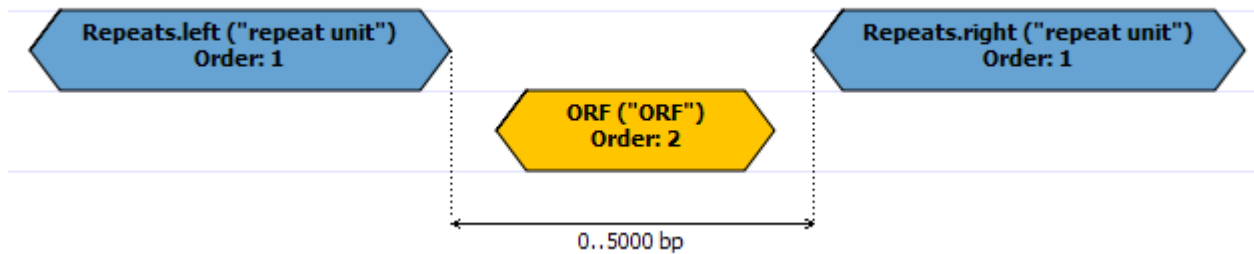
- Slide the *Repeats* element subunits apart.

Result:

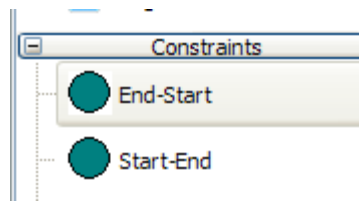


- Drag the *ORF* element from the *Palette* and drop it between the repeats.

Result: The *ORF* element is presented on the *Scene*:

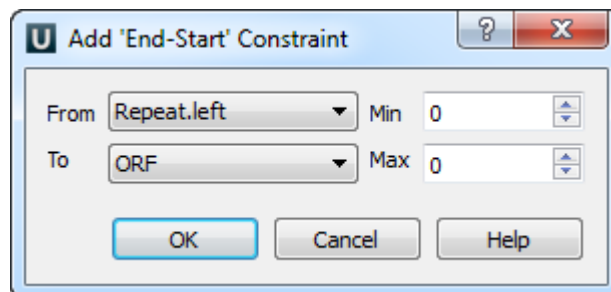


- Find the *End-Start* constraint on the *Palette*:



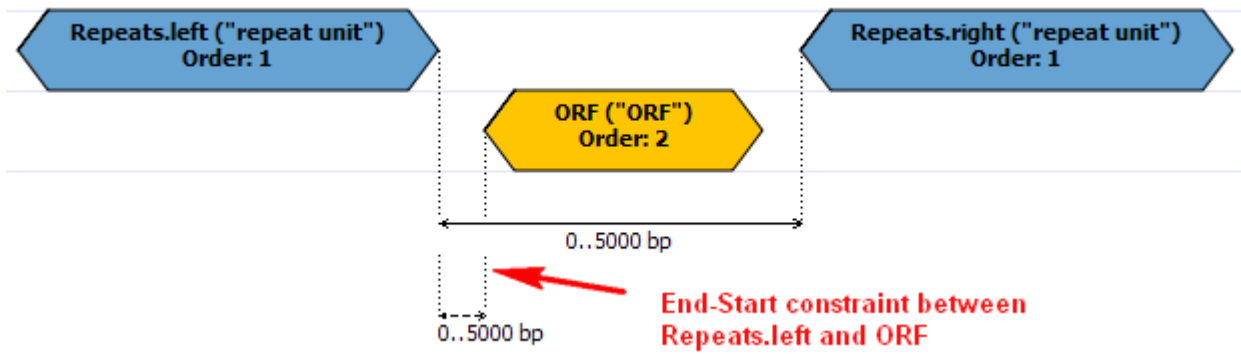
And drag it between the left *Repeats* element and *ORF*.

Result: The dialog appears:



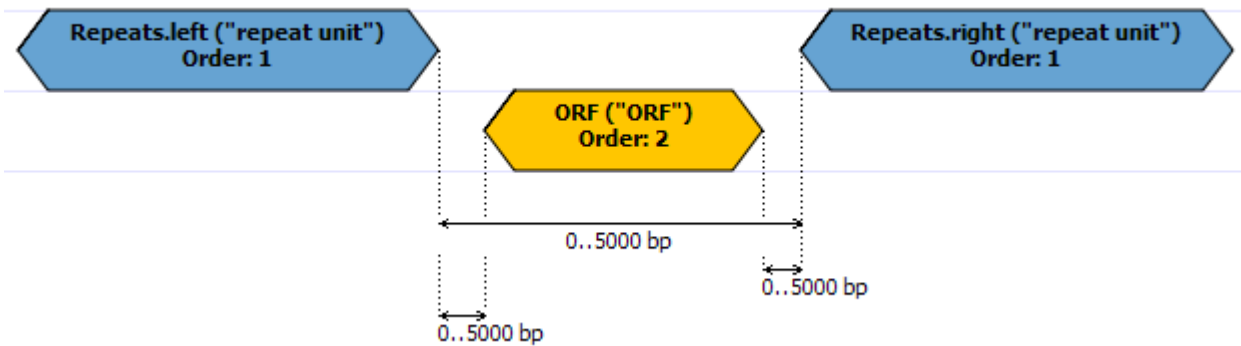
- Check that *From* equals to *Repeats.left* and *To* equals to *ORF*. Set *Max* to 5000. Press the *OK* button.

Result: The constraint has been added to the elements:



- Repeat steps 5-6 for *ORF* element and the right *Repeats* subunit.

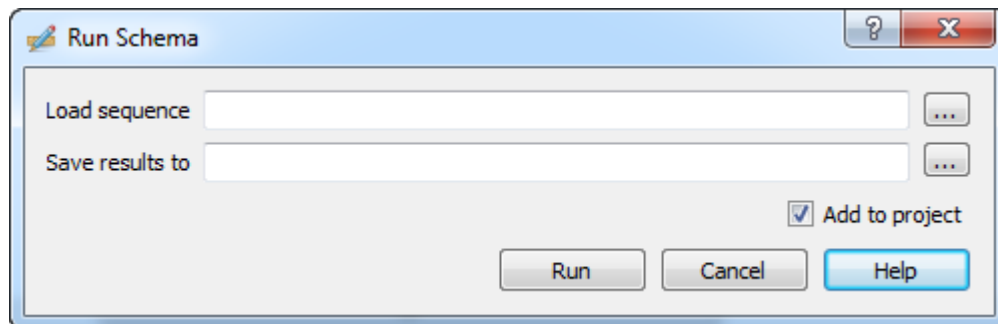
Result: The schema looks as follows:



- Press the *Run Schema* button on the toolbar:



Result: The *Run schema* dialog appears:



- Browse for the sequence to analyze (the *Load sequence* field) and for a GenBank file to save results to (the *Save results to* field). Click the *Run* button.

Result: Both the sequence and the file with annotations are added to the current project. The sequence appears in the Sequence View window, for example:

The screenshot shows the UGENE software interface. The main window displays a sequence view of NC_004718. The sequence is shown in a multi-track format, including features like NP 828850.1, NP 828849.2, and ORF. Below the sequence map, the sequence alignment is shown, with a highlighted region: TTGGCACTGATCCCATTGAAGATTATGAACAAAACCTGGAACACTAAGCATG. The bottom panel shows a list of results for ORF and repeat units.

Name	Value
C:/results.gb [results.gb]	
Result 1 (0, 3)	
ORF	734..1225
repeat_unit	339..349
repeat_unit	1540..1550
Result 10 (0, 3)	
ORF	complement(1788..2015)
repeat_unit	695..704
repeat_unit	2375..2384
Result 100 (0, 3)	

! To learn more about the Sequence View read main UGENE User Manual.

! The schema described in this example is also available as sample schema. Select the *Samples* tab on the *Palette* and double-click the *ORF-Repeats* to open the sample schema.