How to Create and Run Schema

• Select the Tools Query Designer item in the main menu.

Result: The Query Designer window appears:

U UGENE	
<u>File Actions Settings Tools Window Help</u>	
🗖 🗁 🖹 🖺 🖺 🕨 🔍 🛬	
A Query Designer - NewSchema	
Elements Groups Samples	Property Editor
	Select an element to inspect.
нимз	
···· 🛃 ORF	
Repeats	
RestrictionSites	
Sitecon	Parameters
Smith-Waterman	
🔯 2: Tasks 🔲 3: Log	No active tasks 💡 🔛

• Drag the Repeats element from the Palette to the Scene.

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

ፉ Query Designer - NewSchema		
Elements Groups Samples	1025000 bp	
👰 CDD		
ӨНММ З	Repeats.left ("repeat unit") Order: 1	
🖳 ORF		
Y Primer		
Repeats		
Restriction sites	05000 bp	

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:

U Add	l 'End-Start' Constraint		8	x
From	Repeat.left 👻	Min	0	<u>*</u>
То	ORF 👻	Max	0	*
	OK Canc	el	Help	

• 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:

💋 Run Schema	8 ×
Load sequence	
Save results to	
	Add to project
	Run Cancel Help

• 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 bu tton.

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:



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 ORFRepeats to open the sample schema.