

Query Designer Schema File Format

Using the GUI is not the only way to create / edit a *schema*. As specified [earlier](#) a schema is saved to a file with *.uql extension. This chapter describes the format of the file and explains how you can create / edit a schema file using a text editor.

The best way to learn schema file format is to study an existent *.uql file. For example, let's take the sample schema file described in the [example](#). Open the file in a text editor. On the image below you can see the file opened in the MS WordPad.

```
ORFbtwRepeats.uql - WordPad
File Edit View Insert Format Help
Courier New 10 Western B / U
#!UGENE_QUERY
#Open Reading Frame surrounded by repeat units
query ORF-Repeats {
  Repeat { type: repeats; min-length: 10; }
  ORF { type: orf; }
  Repeat.left--ORF.unit { type: distance; distance_type: end-to-end; }
  ORF.unit--Repeat.right { type: distance; distance_type: end-to-end; }
  .meta{
    visual{
      Repeat.left { geometry: 35,30,229,120,120; }
      Repeat.right { geometry: 504,30,238,120,120; }
      ORF.unit { geometry: 302,150,166,160,160; }
    }
  }
}
```

The image shows a WordPad window titled "ORFbtwRepeats.uql - WordPad". The window contains a schema file with the following content: `#!UGENE_QUERY`, `#Open Reading Frame surrounded by repeat units`, `query ORF-Repeats {`, `Repeat { type: repeats; min-length: 10; }`, `ORF { type: orf; }`, `Repeat.left--ORF.unit { type: distance; distance_type: end-to-end; }`, `ORF.unit--Repeat.right { type: distance; distance_type: end-to-end; }`, `.meta{`, `visual{`, `Repeat.left { geometry: 35,30,229,120,120; }`, `Repeat.right { geometry: 504,30,238,120,120; }`, `ORF.unit { geometry: 302,150,166,160,160; }`, `}`, `}`, `}`. Red annotations include: "Header" pointing to the first two lines, "Title of the schema" pointing to "ORF-Repeats", "Algorithm elements" pointing to the "Repeat" and "ORF" definitions, "Constraint elements" pointing to the distance constraints, and "Metainformation" pointing to the ".meta" block.

The file consists of the header and the body. Check the description of each part below.

- Header
- Body
 - Element Description
 - Algorithm Element Description
 - Constraint Element Description
 - Metainformation