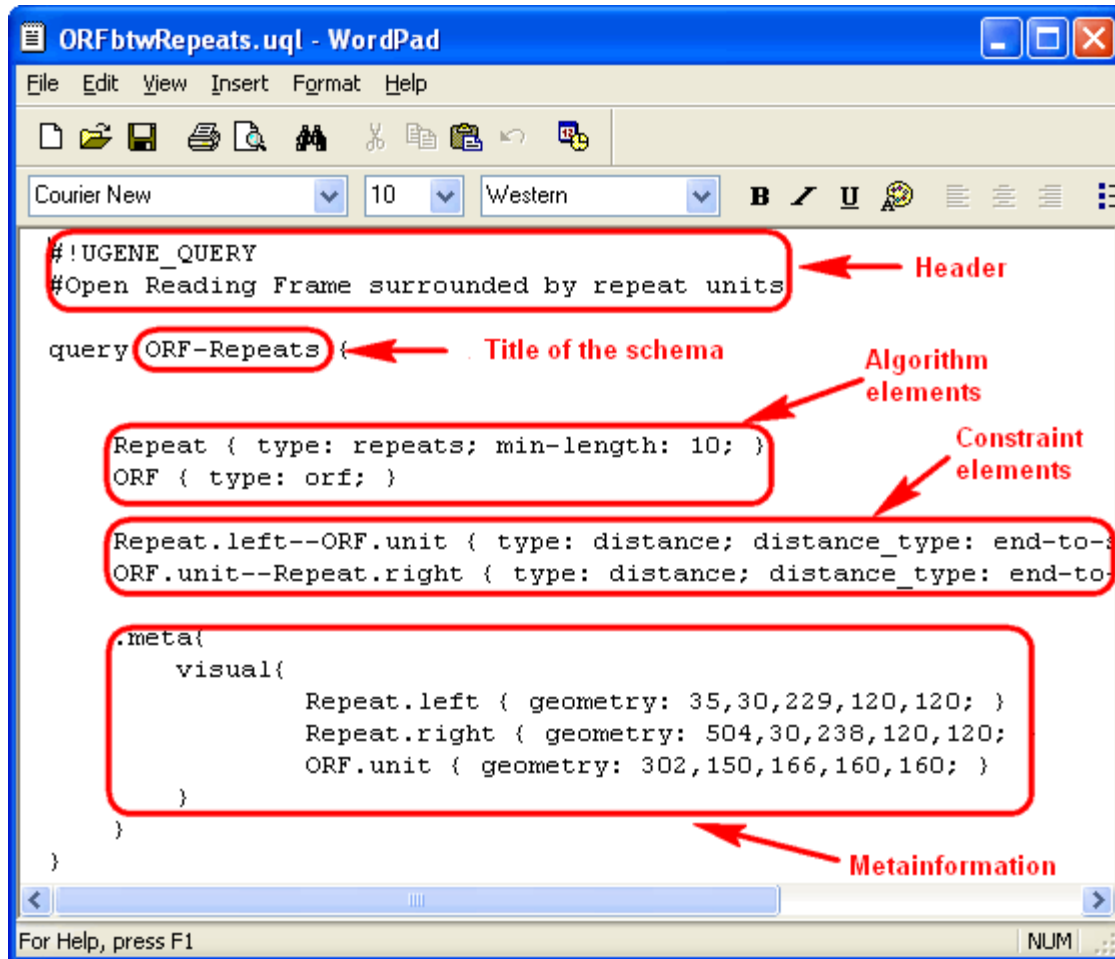


Query Designer Schema File Format

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.



The image shows a WordPad window titled "ORFbtwRepeats.uql - WordPad". The menu bar includes File, Edit, View, Insert, Format, and Help. The toolbar shows various editing icons. The font is set to Courier New, size 10, with a Western font style. The text content is a schema file with several parts highlighted by red boxes and arrows:

- Header:** A red box highlights the first two lines: `#!UGENE_QUERY` and `#Open Reading Frame surrounded by repeat units`. A red arrow points to this box with the label "Header".
- Title of the schema:** A red box highlights the line `query ORF-Repeats {`. A red arrow points to this box with the label "Title of the schema".
- Algorithm elements:** A red box highlights the line `Repeat { type: repeats; min-length: 10; }`. A red arrow points to this box with the label "Algorithm elements".
- Constraint elements:** A red box highlights the line `ORF { type: orf; }`. A red arrow points to this box with the label "Constraint elements".
- Metainformation:** A red box highlights the entire `.meta{}` block, which includes a `visual{}` section with geometry definitions for `Repeat.left`, `Repeat.right`, and `ORF.unit`. A red arrow points to this box with the label "Metainformation".

```
#!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 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