

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.

```
#!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; }
    }
  }
}
```

Annotations in the image:

- Header:** Points to the first two lines: `#!UGENE_QUERY` and `#Open Reading Frame surrounded by repeat units`.
- Title of the schema:** Points to the query name `ORF-Repeats` in the `query` statement.
- Algorithm elements:** Points to the `Repeat` and `ORF` blocks.
- Constraint elements:** Points to the distance constraints between `Repeat` and `ORF`.
- Metainformation:** Points to the `.meta{ visual{ ... }` 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