

GraphQL Task

Modifications I did in my django simulator app to support graphql task:

- 1- Created the GraphQL Schema in a file called "schema.py" to add the code for GraphQL schema of the query and mutations. (code attached with this mail)
- 2- In settings I added GraphQL schema configuration

```
✓ GRAPHENE = {  
    "SCHEMA": "simulator.schema.schema"  
}
```

- 3- Updated urls.py in Main Project Folder to add a GraphQL endpoint

```
✓ from django.contrib import admin  
from django.urls import path  
from graphene_django.views import GraphQLView  
  
✓ urlpatterns = [  
    path('admin/', admin.site.urls),  
    path('graphql/', GraphQLView.as_view(graphiql=True)),  
]
```

- 4- Now I can access the GraphQL interface at <http://localhost:8000/graphql/>

Endpoints testing:

1- Listing all my simulators

```
1 query {
2   allSimulators {
3     id
4     startDate
5     interval
6     kpiId
7   }
8 }
9
```

```
{
  "data": {
    "allSimulators": [
      {
        "id": "1",
        "startDate": "2024-12-21T18:32:18+00:00",
        "interval": "@daily",
        "kpiId": 2
      },
      {
        "id": "2",
        "startDate": "2024-12-22T12:00:00+00:00",
        "interval": "@hourly",
        "kpiId": 2
      },
      {
        "id": "5",
        "startDate": "2024-12-22T11:55:18+00:00",
        "interval": "@weekly",
        "kpiId": 1
      }
    ]
  }
}
```

Only returning the startDate

```
1 query {
2   allSimulators {
3     startDate
4   }
5 }
6
```

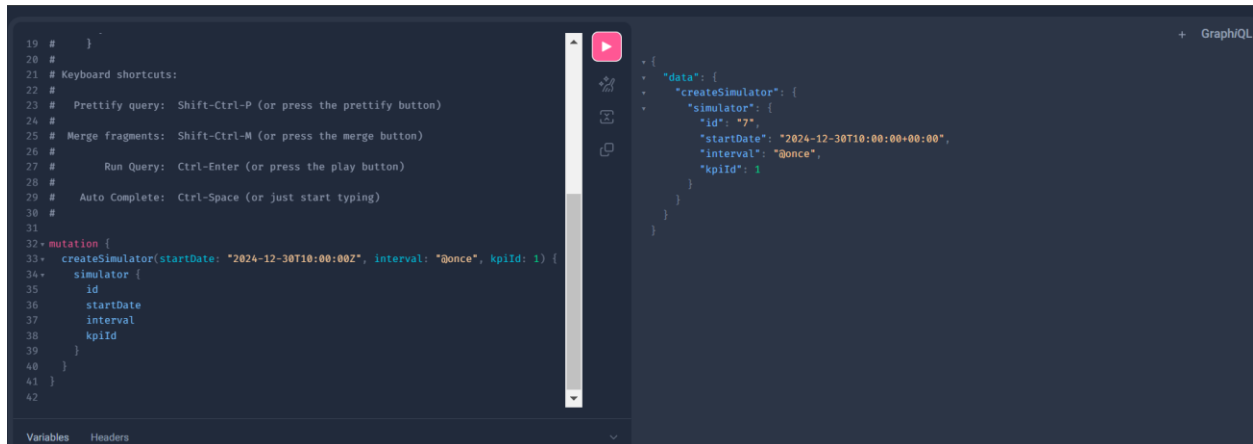
```
{
  "data": {
    "allSimulators": [
      {
        "startDate": "2024-12-21T18:32:18+00:00"
      },
      {
        "startDate": "2024-12-22T12:00:00+00:00"
      },
      {
        "startDate": "2024-12-22T11:55:18+00:00"
      }
    ]
  }
}
```

Only returning everything apart from the kpiId

```
1 query {
2   allSimulators {
3     id
4     startDate
5     interval
6   }
7 }
8
```

```
{
  "data": {
    "allSimulators": [
      {
        "id": "1",
        "startDate": "2024-12-21T18:32:18+00:00",
        "interval": "@daily"
      },
      {
        "id": "2",
        "startDate": "2024-12-22T12:00:00+00:00",
        "interval": "@hourly"
      },
      {
        "id": "5",
        "startDate": "2024-12-22T11:55:18+00:00",
        "interval": "@weekly"
      }
    ]
  }
}
```

2- Creating a Simulator (Mutation)



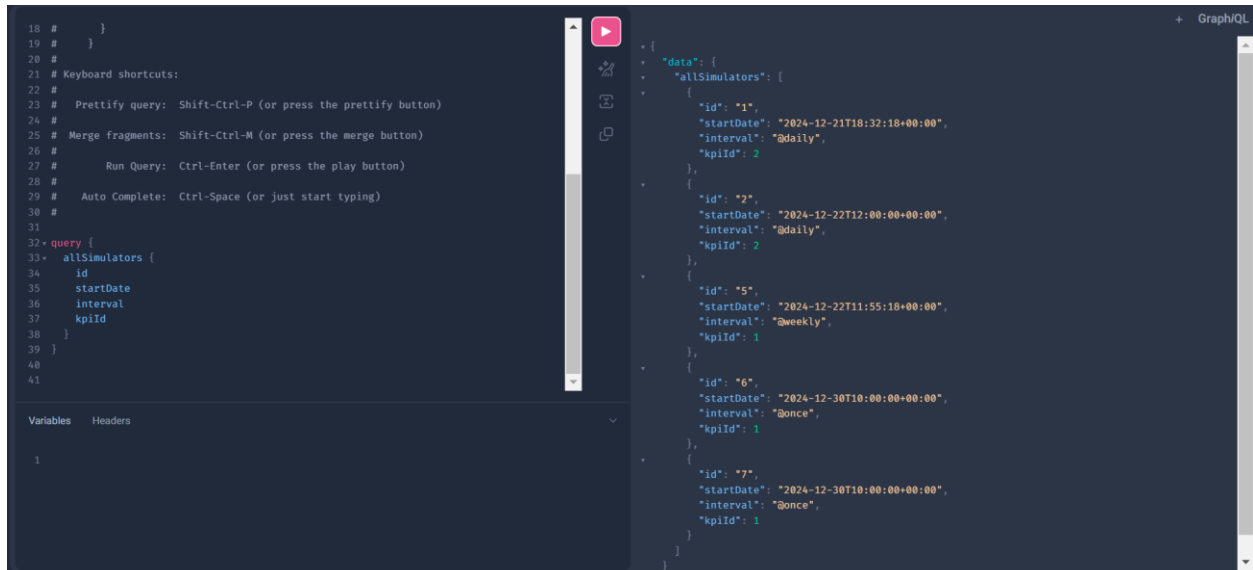
The screenshot shows a GraphQL IDE with a dark theme. On the left, a query editor contains a mutation query. On the right, the JSON response is displayed. The query is a mutation to create a simulator. The response is a JSON object with a 'data' field containing a 'createSimulator' field, which is an object with 'id', 'startDate', 'interval', and 'kpiId'.

```
19 # }
20 #
21 # Keyboard shortcuts:
22 #
23 # Prettify query: Shift-Ctrl-P (or press the prettify button)
24 #
25 # Merge fragments: Shift-Ctrl-M (or press the merge button)
26 #
27 # Run Query: Ctrl-Enter (or press the play button)
28 #
29 # Auto Complete: Ctrl-Space (or just start typing)
30 #
31
32 mutation {
33   createSimulator(startDate: "2024-12-30T10:00:00Z", interval: "@once", kpiId: 1) {
34     simulator {
35       id
36       startDate
37       interval
38       kpiId
39     }
40   }
41 }
42
```

```
{
  "data": {
    "createSimulator": {
      "simulator": {
        "id": "7",
        "startDate": "2024-12-30T10:00:00+00:00",
        "interval": "@once",
        "kpiId": 1
      }
    }
  }
}
```

Variables Headers

Making sure it's added successfully



The screenshot shows a GraphQL IDE with a dark theme. On the left, a query editor contains a query to fetch all simulators. On the right, the JSON response is displayed. The query is a query to fetch all simulators. The response is a JSON object with a 'data' field containing an 'allSimulators' field, which is an array of simulator objects. Each object has 'id', 'startDate', 'interval', and 'kpiId'.

```
18 # }
19 #
20 #
21 # Keyboard shortcuts:
22 #
23 # Prettify query: Shift-Ctrl-P (or press the prettify button)
24 #
25 # Merge fragments: Shift-Ctrl-M (or press the merge button)
26 #
27 # Run Query: Ctrl-Enter (or press the play button)
28 #
29 # Auto Complete: Ctrl-Space (or just start typing)
30 #
31
32 query {
33   allSimulators {
34     id
35     startDate
36     interval
37     kpiId
38   }
39 }
40
41
```

```
{
  "data": {
    "allSimulators": [
      {
        "id": "1",
        "startDate": "2024-12-21T18:32:18+00:00",
        "interval": "@daily",
        "kpiId": 2
      },
      {
        "id": "2",
        "startDate": "2024-12-22T12:00:00+00:00",
        "interval": "@daily",
        "kpiId": 2
      },
      {
        "id": "5",
        "startDate": "2024-12-22T11:55:18+00:00",
        "interval": "@weekly",
        "kpiId": 1
      },
      {
        "id": "6",
        "startDate": "2024-12-30T10:00:00+00:00",
        "interval": "@once",
        "kpiId": 1
      },
      {
        "id": "7",
        "startDate": "2024-12-30T10:00:00+00:00",
        "interval": "@once",
        "kpiId": 1
      }
    ]
  }
}
```

Variables Headers

3- Updating one of my Simulators (Mutation)

Updated the interval for my simulator interval with id 2

```
1 mutation {
2   updateSimulator(id: 2, interval: "@once") {
3     simulator {
4       id
5       startDate
6       interval
7       kpiId
8     }
9   }
10 }
11
```

```
{
  "data": {
    "updateSimulator": {
      "simulator": {
        "id": "2",
        "startDate": "2024-12-22T12:00:00+00:00",
        "interval": "@once",
        "kpiId": 2
      }
    }
  }
}
```

Updated correctly.

```
1 query {
2   allSimulators {
3     id
4     startDate
5     interval
6     kpiId
7   }
8 }
9
```

```
{
  "data": {
    "allSimulators": [
      {
        "id": "1",
        "startDate": "2024-12-21T18:32:18+00:00",
        "interval": "@daily",
        "kpiId": 2
      },
      {
        "id": "2",
        "startDate": "2024-12-22T12:00:00+00:00",
        "interval": "@once",
        "kpiId": 2
      },
      {
        "id": "5",
        "startDate": "2024-12-22T11:55:18+00:00",
        "interval": "@weekly",
        "kpiId": 1
      }
    ]
  }
}
```

4- Deleting a Simulator (Mutation)

```
1 mutation {
2   deleteSimulator(id: 1) {
3     success
4   }
5 }
6
```

```
{
  "data": {
    "deleteSimulator": {
      "success": true
    }
  }
}
```

Deleted successfully

```
1 query {
2   allSimulators {
3     id
4     startDate
5     interval
6     kpiId
7   }
8 }
9
```

```
{
  "data": {
    "allSimulators": [
      {
        "id": "2",
        "startDate": "2024-12-22T12:00:00+00:00",
        "interval": "@once",
        "kpiId": 2
      },
      {
        "id": "5",
        "startDate": "2024-12-22T11:55:18+00:00",
        "interval": "@weekly",
        "kpiId": 1
      }
    ]
  }
}
```