



AiDock React frontend Assignment

This assignment needs to be written in React \ NextJS.

At AiDock we have a lot of graphs between AI models and we want to create a graph designer for the models.

In this project we will create a graph designer that implements those requirements:

- **The graph should import and export a json file** ,in other words we can provide a json and import it to the graph designer and we will render it and also we can export the existing design to json.
- The graph will have multi nodes that connect each other, in other words we don't have a limit of connections between nodes. We can have a single node without connection.
- Nodes have their own props : name, metadata (dictionary) and **we connect between them by inputs**,for example if node a wants information from Node B he will have a pointer to Node B so there will be a connection between them in this format:

```
# inputs in node A - need information from node B.  
"inputs": {  
  "B-size": "node-B -> metadata.size"  
}
```

Technical information:

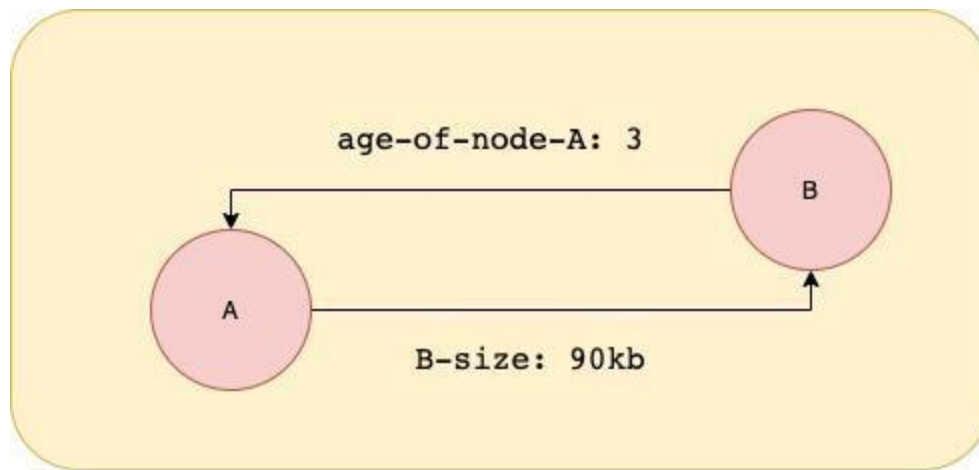
- Please take a look at the project structure that you develop.
- The graph should be draggable (Nodes) and responsive.
- Clear code and speratated components.
- Use any react library that you like to create graphs (d3 or other).
- Use any material UI for react.
- Please write the project with TSX or JSX.
- Please add tests on functions with logic.

JSON for example :

```
{
  "name": "Sample graph",
  "nodes": {

    "node-A": {
      "name": "A",
      "inputs": {
        "B-size": "node-B -> metadata.size"
      },
      "metadata": {
        "age": 3,
      }
    },
    "node-B": {
      "inputs": {
        "age-of-node-A": "node-A -> metadata.age"
      },
      "name": "B",
      "metadata": {
        "age": 10,
        "size": "90kb"
      }
    }
  }
}
```

The graph will be draw like the figure



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