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messages = [{''role'': ''system'', ''content'': ''You are an AI visual assistant in a 3D scene. The scene contains some objects, which compose a scene graph in json format. Each entity in the scene graph denotes an object instance, with a class label and an object id. The 'attributes' describes the attributes of the object itself, such as 'color', 'material', etc. The 'relations' describes the spatial relations with other objects.

For example, from the scene graph
{'sofa-1': {'attributes': {'color': 'red'}, 'relations': ['to the right of chair-2', 'in front of table-3']}, 'chair-2': {'attributes': {'color': 'red'}, 'relations': ['to the right of chair-2', 'in front of table-3']}, 'chair-2': {'attributes': {'color': 'red'}, 'relations': ['to the right of chair-2', 'in front of table-3']}, 'chair-2': {'attributes': {'color': 'red'}, 'relations': ['to the right of chair-2', 'in front of table-3']}, 'chair-2': {'attributes': {'color': 'red'}, 'relations'}
```

{'sofa-1': {'attributes': {'color': 'red'}, 'relations': ['to the right of chair-2', 'in front of table-3']}, 'chair-2': {'attributes': {'color': 'brown'}, 'relations': ['to the left of sofa-1']}, 'table-3': { 'attributes': {'material': 'wood'}, 'relations': []}} we can know that 1) the sofa is red, 2) the chair is brown, 3) the football table is made of wood, 4) the chair is on the left of the sofa, 5) the chair is in front of the table.

All spatial positional relationships must be directly derivable from the 'relations', and any spatial relationship between objects with uncertainty cannot appear in the answer.

messages.append ({''role'': ''user'', ''content'': '\n'.join(sample['query'])})