**Chương trình mapreduce (2 jobs)**

-  **mapper**

**+ max\_price\_mapper.py**

**import sys**

**import json**

**for line in sys.stdin:**

**try:**

**record = json.loads(line)**

**price = float(record.get('price', 0))**

**title = record.get('title', '')**

**print(f"max\_price\t{price}\t{title}")**

**except:**

**continue**

**+ min\_price\_mapper.py**

**import sys**

**import json**

**for line in sys.stdin:**

**try:**

**record = json.loads(line)**

**price = float(record.get('price', 0))**

**title = record.get('title', '')**

**print(f"min\_price\t{price}\t{title}")**

**except:**

**continue**

**reducer**

**+ max\_price\_reducer.py**

**import sys**

**max\_price = -1**

**max\_title = ""**

**for line in sys.stdin:**

**try:**

**key, price, title = line.strip().split('\t', 2)**

**price = float(price)**

**if price > max\_price:**

**max\_price = price**

**max\_title = title**

**except:**

**continue**

**print(f"Max\_Price\t{max\_price}\t{max\_title}")**

**+ min\_price\_reducer.py**

**import sys**

**min\_price = float('inf')**

**min\_title = ""**

**for line in sys.stdin:**

**try:**

**key, price, title = line.strip().split('\t', 2)**

**price = float(price)**

**if price < min\_price:**

**min\_price = price**

**min\_title = title**

**except:**

**continue**

**print(f"Min\_Price\t{min\_price}\t{min\_title}")**