```
!pip install lightfm --quiet
```

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  Preparing metadata (setup.py) ... done
  Building wheel for lightfm (setup.py) ... done
```

```
import numpy as np
import pandas as pd
from lightfm import LightFM
from lightfm.data import Dataset


interactions_df = pd.DataFrame({
    'user_id': ['A', 'A', 'B', 'C', 'C', 'D'],
    'item_id': ['Item1', 'Item2', 'Item2', 'Item3', 'Item1', 'Item3']
})


dataset = Dataset()
dataset.fit(interactions_df['user_id'], interactions_df['item_id'])

(interactions, weights) = dataset.build_interactions(
    [(row['user_id'], row['item_id']) for index, row in interactions_df.iterrows()]
)


model = LightFM(loss='warp')
model.fit(interactions, epochs=10, num_threads=1)
```

```
<lightfm.lightfm.LightFM at 0x7ffa3a97c790>
```

```
# Get all users and items
# user_ids, user_mapping, _ = dataset.UserMapping_mapping, dataset._user_id_mapping, dataset._user_feature_mapping
# item_ids, item_mapping, _ = dataset.ItemMapping_mapping, dataset._item_id_mapping, dataset._item_feature_mapping

# Recommend items for each user
def recommend(model, dataset, user_id, num_recommendations=2):
    n_users, n_items = dataset.interactions_shape()
    user_index = dataset._user_id_mapping[user_id]

    scores = model.predict(user_index, np.arange(n_items))
    top_items = np.argsort(-scores)[:num_recommendations]

    reverse_item_mapping = {v: k for k, v in dataset._item_id_mapping.items()}

    print(f"\nTop {num_recommendations} recommendations for User '{user_id}':")
    for item_index in top_items:
        print(f"  {reverse_item_mapping[item_index]} (score: {scores[item_index]:.2f})")

# Try recommending for user A, B, C, D
for user in ['A', 'B', 'C', 'D']:
    recommend(model, dataset, user)
```

```

 Top 2 recommendations for User 'A':
   Item1 (score: -0.09)
   Item3 (score: -0.11)

 Top 2 recommendations for User 'B':
   Item1 (score: -0.06)
   Item3 (score: -0.07)

 Top 2 recommendations for User 'C':
   Item3 (score: -0.12)
   Item1 (score: -0.13)

 Top 2 recommendations for User 'D':
   Item3 (score: -0.11)
   Item1 (score: -0.12)
```

Start coding or generate with AI.