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!pip install scikit-learn pandas
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import pandas as pd
from sklearn.feature_extraction.text import CountVectorizer
from sklearn.metrics.pairwise import cosine_similarity
```

```
data = {
    "movieId": list(range(1, 31)),
    "title": [
        "The Shawshank Redemption", "The Godfather", "The Dark Knight", "Pulp Fiction", "Forrest
Gump",
        "Inception", "The Matrix", "The Lord of the Rings: The Return of the King", "Fight Club",
        "Interstellar",
        "The Green Mile", "Gladiator", "Titanic", "The Lion King", "Back to the Future",
        "The Silence of the Lambs", "Saving Private Ryan", "Avengers: Endgame", "The Prestige",
        "Joker",
        "Schindler's List", "Se7en", "The Departed", "The Social Network", "Parasite",
        "Whiplash", "La La Land", "Django Unchained", "The Wolf of Wall Street", "Mad Max: Fury
Road"
    ],
    "genres": [
        "Drama", "Crime", "Action", "Crime", "Drama",
        "Sci-Fi", "Sci-Fi", "Fantasy", "Drama", "Sci-Fi",
        "Drama", "Action", "Romance", "Animation", "Adventure",
        "Thriller", "War", "Action", "Mystery", "Crime",
        "History", "Thriller", "Crime", "Biography", "Thriller",
        "Drama", "Musical", "Western", "Biography", "Action"
    ]
}
```

```
df = pd.DataFrame(data)
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vectorizer = CountVectorizer(tokenizer=lambda x: x.split())
genre_matrix = vectorizer.fit_transform(df['genres'])
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```
cos_sim = cosine_similarity(genre_matrix)
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```
def recommend_movies(title, top_n=5):
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if title not in df['title'].values:
    print(f"'{title}' not found in the movie list.")
    return []

idx = df[df['title'] == title].index[0]
similarity_scores = list(enumerate(cos_sim[idx]))
sorted_scores = sorted(similarity_scores, key=lambda x: x[1], reverse=True)[1:top_n+1]

recommendations = [(df.iloc[i]['title'], round(score, 2)) for i, score in sorted_scores]
return recommendations
```

```
movie_input = "Inception"
print(f"\nBecause you liked: '{movie_input}'")
print("You may also like:")
```

```
for title, score in recommend_movies(movie_input):
    print(f'{title} (Similarity: {score})')
```