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import pandas as pd

# Sample dataset #1
train = pd.DataFrame(
    {
        "age": [25, None, 40, 33],
        "city": ["NY", "SF", None, "NY"]
    }
)

# Sample dataset #2
test = pd.DataFrame(
    {
        "age": [None, 50],
        "city": ["SF", None]
    }
)

# Fill missing values in train dataset
age1 = train["age"].median()
city1 = train["city"].mode()[0]

# Fill missing values in test dataset (Simple)
test_e = test.copy()
test_e["age"] = test_e["age"].fillna(age1)
test_e["city"] = test_e["city"].fillna(city1)

# Fill missing values in test dataset (With Indicators)
test_n = test.copy()
test_n["age_missing"] = test_n["age"].isna().astype(int)
test_n["city_missing"] = test_n["city"].isna().astype(int)
test_n["age"] = test_n["age"].fillna(age1)
test_n["city"] = test_n["city"].fillna(city1)

# Print results
print("Result 1: test_e (Simple)")
print(test_e)

print("\nResult 2: test_n (With Indicators)")
print(test_n)

```