

```
import pandas as pd
import seaborn as sns
import matplotlib.pyplot as plt

# 1. Dataset Load karna (Titanic dataset sabse best hai)
df = sns.load_dataset('titanic')

# 2. Data ko dekhna (Task 2: EDA)
print("--- Data ki Pehli 5 Rows ---")
print(df.head())

print("\n--- Khali jaghen (Missing Values) ---")
print(df.isnull().sum())

# 3. Graphs Banana (Task 3: Visualization)
plt.figure(figsize=(10, 5))

# Graph 1: Kitne log bache aur kitne nahi
plt.subplot(1, 2, 1)
sns.countplot(data=df, x='survived', palette='viridis')
plt.title('Survival Count (0 = No, 1 = Yes)')

# Graph 2: Mardo aur Auraton ki survival rate
plt.subplot(1, 2, 2)
sns.barplot(data=df, x='sex', y='survived', palette='magma')
plt.title('Survival Rate by Gender')

plt.tight_layout()
plt.show()

# Ek Heatmap banana correlations dekhne ke liye
plt.figure(figsize=(8, 6))
sns.heatmap(df.corr(numeric_only=True), annot=True, cmap='coolwarm')
plt.title('Correlation Heatmap')
plt.show()
```

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--- Data ki Pehli 5 Rows ---
   survived  pclass     sex   age  sibsp  parch      fare embarked  class \
0          0       3  male  22.0      1      0    7.2500        S  Third
1          1       1 female  38.0      1      0   71.2833        C  First
2          1       3 female  26.0      0      0    7.9250        S  Third
3          1       1 female  35.0      1      0  53.1000        S  First
4          0       3  male  35.0      0      0    8.0500        S  Third

   who  adult_male  deck  embark_town  alive  alone
0  man        True    NaN  Southampton   no  False
1 woman      False     C  Cherbourg  yes  True
2 woman      False    NaN  Southampton  yes  True
3 woman      False     C  Southampton  yes False
4  man        True    NaN  Southampton   no  True

--- Khali jaghen (Missing Values) ---
survived      0
pclass        0
sex           0
age         177
sibsp        0
parch        0
fare          0
embarked      2
class         0
who           0
adult_male    0
deck        688
embark_town    2
alive         0
alone         0
dtype: int64
/tmpp/ipython-input-4142348389.py:20: FutureWarning:

```

Passing `palette` without assigning `hue` is deprecated and will be removed in v0.14.0. Assign the `x` variable to `hue` and se

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sns.countplot(data=df, x='survived', palette='viridis')
/tmpp/ipython-input-4142348389.py:25: FutureWarning:

```

Passing `palette` without assigning `hue` is deprecated and will be removed in v0.14.0. Assign the `x` variable to `hue` and se

```

sns.barplot(data=df, x='sex', y='survived', palette='magma')

```

