In [1]:
```
import pandas as pd

# Load the dataset into a Pandas DataFrame
url = 'http://archive.ics.uci.edu/ml/machine-learning-databases/adult/adult.da
column_names = [
    'age', 'workclass', 'fnlwgt', 'education', 'education-num', 'marital-statu
    'occupation', 'relationship', 'race', 'sex', 'capital-gain', 'capital-loss
    'hours-per-week', 'native-country', 'salary'
]
df = pd.read_csv(url, names=column_names)

# 1. How many men and women (sex feature) are represented in this dataset?
gender_counts = df['sex'].value_counts()
print(gender_counts)

# 2. What is the average age (age feature) of women?
average_age_women = df[df['sex'] == 'Female']['age'].mean()
print(average_age_women)

# 3. What is the proportion of German citizens (native-country feature)?
german_citizens = df[df['native-country'] == 'Germany']
proportion_german_citizens = len(german_citizens) / len(df) * 100
print(proportion_german_citizens)

# 4-5. What are the mean value and standard deviation of the age of those who
higher_income_ages = df[df['salary'] == '>50K']['age']
lower_income_ages = df[df['salary'] == '<=50K']['age']
mean_higher_income_age = higher_income_ages.mean()
std_higher_income_age = higher_income_ages.std()
mean_lower_income_age = lower_income_ages.mean()
std_lower_income_age = lower_income_ages.std()
print("Mean and standard deviation of age for those with higher income:")
print(mean_higher_income_age, std_higher_income_age)
print("Mean and standard deviation of age for those with lower income:")
print(mean_lower_income_age, std_lower_income_age)

# 6. Is it true that people who receive more than 50k have at least high schoo
higher_income_education = df[df['salary'] == '>50K']['education'].unique()
required_education = ['Bachelors', 'Prof-school', 'Assoc-acdm', 'Assoc-voc', '
has_required_education = all(edu in higher_income_education for edu in require
print(has_required_education)
```

```
 Male      21790
 Female    10771
Name: sex, dtype: int64
nan
0.0
Mean and standard deviation of age for those with higher income:
nan nan
Mean and standard deviation of age for those with lower income:
nan nan
False
```

In [ ]: