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

In [21]:
```
def calculate_demographic_data(print_data=True):
    # Read data from file
    df = df = pd.read_csv("C:/Users/kbabu/Downloads/adult.data.csv")

    # How many of each race are represented in this dataset? This should be a Pandas series with race names as the index labels.
    race_count = pd.Series(df["race"].value_counts())

    # What is the average age of men?
    average_age_men = round(df[df["sex"] == "Male"]["age"].mean(), 1)

    # What is the percentage of people who have a Bachelor's degree?
    percentage_bachelors = round((len(df[df["education"] == "Bachelors"]) / len(df["education"])) *100, 1)

    # What percentage of people without advanced education make more than 50K?

    # with and without `Bachelors`, `Masters`, or `Doctorate`
    higher_education = len(df[((df["education"] == "Bachelors") | (df["education"] == "Masters") | (df["education"] == "Doctorate"))])
    lower_education = len(df[((df["education"] != "Bachelors") & (df["education"] != "Masters") & (df["education"] != "Doctorate"))])

    # percentage with salary >50K
    higher_ed_above_50k = len(df[((df["education"] == "Bachelors") | (df["education"] == "Masters") | (df["education"] == "Doctorate")) & (df["salary"] == ">50K")])
    lower_education_above_50k = len(df[((df["education"] != "Bachelors") & (df["education"] != "Masters") & (df["education"] != "Doctorate")) & (df["salary"] == ">50K")])

    higher_education_rich =  round((higher_ed_above_50k / higher_education)* 100, 1)
    lower_education_rich = round((lower_education_above_50k  / lower_education)* 100,1)

    # What is the minimum number of hours a person works per week (hours-per-week feature)?
    min_work_hours = df["hours-per-week"].min()

    # What percentage of the people who work the minimum number of hours per week have a salary of >50K?
    num_min_workers_above_50k = len(df[(df["hours-per-week"] == min_work_hours) & (df["salary"] == ">50K")])
    num_min_worker = len(df[(df["hours-per-week"] == 1)])

    rich_percentage = round(( num_min_workers_above_50k / num_min_worker ) * 100, 1)

    # What country has the highest percentage of people that earn >50K?
    df1 = round((df[(df["salary"] == ">50K")]["native-country"].value_counts()/df["native-country"].value_counts())*100, 1)
    df1 =  df1.sort_values(ascending=False)
    highest_earning_country = df1.index[0]

    highest_earning_country_percentage = df1[0]

    # Identify the most popular occupation for those who earn >50K in India.
    top_IN_occupation = df[(df["salary"] == ">50K") & ( df["native-country"] == "India")]["occupation"].value_counts().index[0]

    if print_data:
        print("Number of each race:\n", race_count)
        print("Average age of men:", average_age_men)
        print(f"Percentage with Bachelors degrees: {percentage_bachelors}%")
        print(f"Percentage with higher education that earn >50K: {higher_education_rich}%")
        print(f"Percentage without higher education that earn >50K: {lower_education_rich}%")
        print(f"Min work time: {min_work_hours} hours/week")
        print(f"Percentage of rich among those who work fewest hours: {rich_percentage}%")
        print("Country with highest percentage of rich:", highest_earning_country)
        print(f"Highest percentage of rich people in country: {highest_earning_country_percentage}%")
        print("Top occupations in India:", top_IN_occupation)

    return {
        'race_count': race_count,
        'average_age_men': average_age_men,
        'percentage_bachelors': percentage_bachelors,
        'higher_education_rich': higher_education_rich,
        'lower_education_rich': lower_education_rich,
        'min_work_hours': min_work_hours,
        'rich_percentage': rich_percentage,
        'highest_earning_country': highest_earning_country,
        'highest_earning_country_percentage':
        highest_earning_country_percentage,
        'top_IN_occupation': top_IN_occupation
    }
```

```
calculate_demographic_data()
```

```
Number of each race:
 White                 27816
Black                  3124
Asian-Pac-Islander     1039
Amer-Indian-Eskimo      311
Other                   271
Name: race, dtype: int64
Average age of men: 39.4
Percentage with Bachelors degrees: 16.4%
Percentage with higher education that earn >50K: 46.5%
Percentage without higher education that earn >50K: 17.4%
Min work time: 1 hours/week
Percentage of rich among those who work fewest hours: 10.0%
Country with highest percentage of rich: Iran
Highest percentage of rich people in country: 41.9%
Top occupations in India: Prof-specialty
```

Out[21]:
```
{'race_count': White                 27816
 Black                  3124
 Asian-Pac-Islander     1039
 Amer-Indian-Eskimo      311
 Other                   271
 Name: race, dtype: int64,
 'average_age_men': 39.4,
 'percentage_bachelors': 16.4,
 'higher_education_rich': 46.5,
 'lower_education_rich': 17.4,
 'min_work_hours': 1,
 'rich_percentage': 10.0,
 'highest_earning_country': 'Iran',
 'highest_earning_country_percentage': 41.9,
 'top_IN_occupation': 'Prof-specialty'}
```

In [ ]:
```

```