Lab Log Book:

WEEK-2(Jagadeesh)

Outputs:

```
group2 = df.groupby(['relationship', 'reduced-hours']).size()
print("Grouping after reduction:\n", group2)
```

```
Grouping after reduction:
 relationship   reduced-hours
Husband         31              1
                41              1
Not-in-family   26              1
Own-child       11              1
Unmarried       16              1
Wife            36              1
dtype: int64
```

```
group1 = df.groupby(['relationship', 'hours-per-week']).size()
print("Grouping before reduction:\n", group1)
```

```
Grouping before reduction:
 relationship   hours-per-week
Husband         40              1
                50              1
Not-in-family   35              1
Own-child       20              1
Unmarried       25              1
Wife            45              1
dtype: int64
```

```
def reduce_hours(x):
    return x - n

df['reduced-hours'] = df['hours-per-week'].apply(reduce_hours)
print("DataFrame after reduction:\n", df)
```

```
DataFrame after reduction:
     relationship  hours-per-week occupation  reduced-hours
0         Husband              40       Tech             31
1  Not-in-family              35      Sales             26
2      Own-child              20    Student             11
3      Unmarried              25      Admin             16
4         Husband              50       Exec             41
5            Wife              45     Health             36
```

```
SID = 2450489
n = SID % 10
if n == 0:
    n = 10
print("Value of n:", n)
```

```
Value of n: 9
```

```
import pandas as pd

data = {
    'relationship': ['Husband', 'Not-in-family', 'Own-child', 'Unmarried', 'Husband', 'Wife'],
    'hours-per-week': [40, 35, 20, 25, 50, 45],
    'occupation': ['Tech', 'Sales', 'Student', 'Admin', 'Exec', 'Health']
}

df = pd.DataFrame(data)
print("Original DataFrame:\n", df)
```

```
Original DataFrame:
     relationship  hours-per-week occupation
0         Husband              40       Tech
1  Not-in-family              35      Sales
2      Own-child              20    Student
3      Unmarried              25      Admin
4         Husband              50       Exec
5            Wife              45     Health
```