```
fig = plt.figure()
ax = plt.axes(projection='3d')
ax.contour3D(sex, age, chol, 50, cmap='binary')
ax.set_xlabel('sex')
ax.set_ylabel('age')
ax.set_zlabel('chol');

data_heart.dtypes

data_heart.count()

data_heart.hist('target')

sns.jointplot(x='target', y='age', data=data_heart)

sns.boxplot(x='sex', y='age', data=data_heart)

sns.violinplot(x='sex', y='age', data=data_heart)

my_dict = {'age':30, 'cp':65, 'sex':50, 'chol':80}

for i,k in my_dict.items():
    print(i,k)
    plt.bar(i,k)
plt.xlabel('x-axis')
plt.ylabel('y-axis')
plt.show()
```

Problem Solving Using Python and R Lab

Lab14. Animated Data Visualization using R

In this lab, you will use R language and gganimate package to plot various animated charts using the sample dataset available in R language itself.

Question1. Visualize animated bar chart, line chart and scatter plot using R and **gganimate** package.

Reference: https://www.r-graph-gallery.com/animation.html

```
library (gapminder)
library (ggplot2)
library (gganimate)
gapminder
dim(gapminder)
Str(gapminder)
ggplot(gapminder, aes(gdppercap)) + geom_histogram()
# dataset
# aesthetic-aes()
# geometry -geom()
# facet - subplots
# scatterplot
ggplot(gapminder, aes(gdppercap, lifeExp, size = pop))+
    geom_point(aes(color = continent), show.legend = False)+
    scale_x_log10()+
    facet_wrap(continent ~.)+
    labs(title = 'Year: {frame_time}', x = 'GDP per capita',
      y = 'life expectancy') +
    transition_time(year)+ ease_aes('linear')
# anim <-animate(p)
# magick::image_write(anim, path = "myanimation.gif")
```