In [ ]:
```
import pandas as pd
from matplotlib import pyplot as plt
# Read CSV into pandas
data = pd.read_csv("C:/Users/USER/Desktop/MLLABDOCS-11OCT2021/CARS-02.csv")
data.head()

df = pd.DataFrame(data)
```

In [ ]:
```
l1 = list(data.columns.values)
```

In [ ]:
```
#Col 0 = 'car'
l2 = data[l1[0]].tolist()
```

In [ ]:
```
#Col 1 = 'mpg'
l3 = data[l1[1]].tolist()
type(l3[0])
```

In [ ]:
```
#col 2 = 'cyl'
l4 = data[l1[2]].tolist()
type(l4[0])
```

In [ ]:
```
df.plot.scatter(l1[1], l1[2] , s = 100);
```

In [ ]:
```
# Program to draw scatter plot using Dataframe.plot
# Import libraries
import pandas as pd

# Prepare data
data={'Name':l1[0],
      'MPG':l1[1]}

# Load data into DataFrame
df = pd.DataFrame(data = data);

# Draw a scatter plot
df.plot.scatter(x = 'Name', y = 'MPG', s = 100);
```

In [36]:
```
import numpy as np
import pandas as pd
%matplotlib inline
```

```
mu = 168 #mean
sigma = 5 #stddev
sample = 250
np.random.seed(0)
height_f = np.random.normal(mu, sigma, sample).astype(int)

mu = 176 #mean
sigma = 6 #stddev
sample = 250
np.random.seed(1)
height_m = np.random.normal(mu, sigma, sample).astype(int)
```

In [37]:
```
gym = pd.DataFrame({'height_f': height_f, 'height_m': height_m})
```

In [38]:
```
gym
```

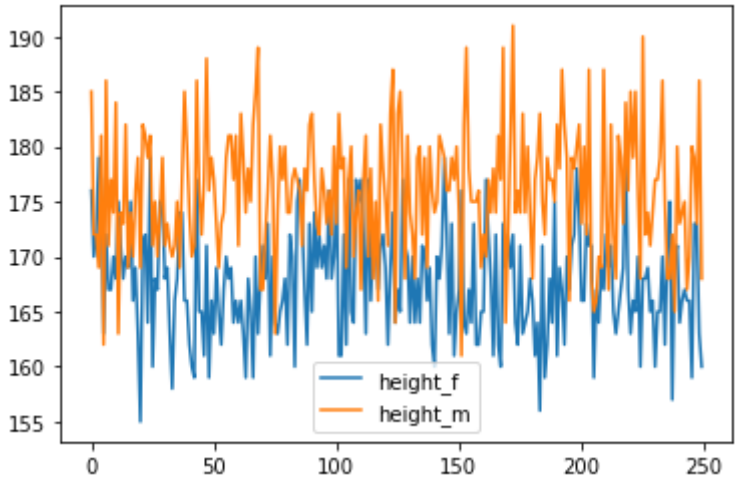
Out[38]:

	height_f	height_m
0	176	185
1	170	172
2	172	172
3	179	169
4	177	181
...	...	...
245	159	180
246	173	179
247	173	173
248	163	186
249	160	168

250 rows × 2 columns

In [39]:
```
gym.plot()
```

Out[39]: <AxesSubplot:>



In [40]:
```
gym.groupby('height_m').count()
```

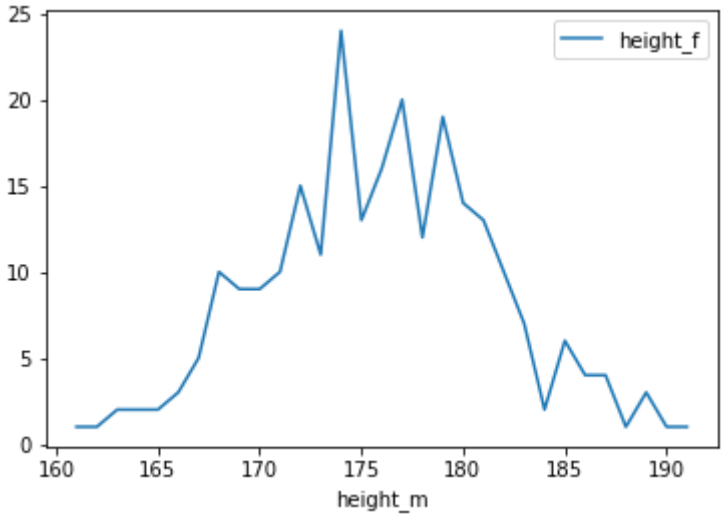
Out[40]:

height_m	height_f
161	1
162	1
163	2
164	2
165	2
166	3
167	5
168	10
169	9
170	9
171	10
172	15

height_m	height_f
173	11
174	24
175	13
176	16
177	20
178	12
179	19
180	14
181	13
182	10
183	7
184	2
185	6
186	4
187	4
188	1
189	3
190	1
191	1

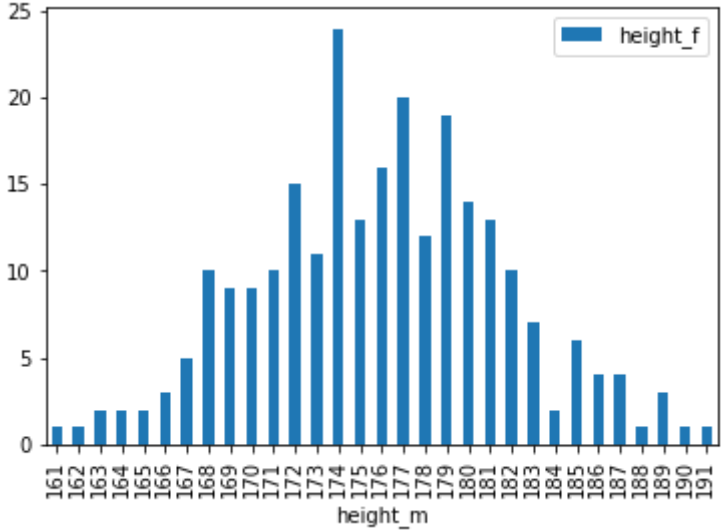
In [41]:
```
gym.groupby('height_m').count().plot()
```

Out[41]:
```
<AxesSubplot:xlabel='height_m'>
```



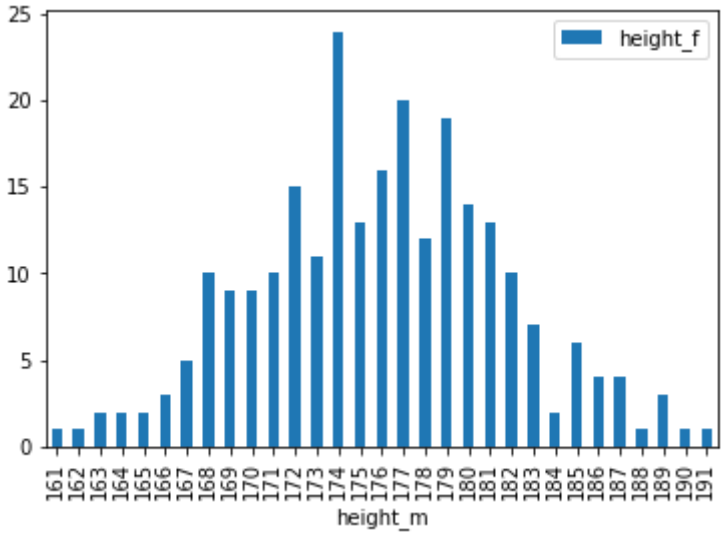
In [42]:
```
gym.groupby('height_m').count().plot.bar()
```

Out[42]: <AxesSubplot:xlabel='height_m'>



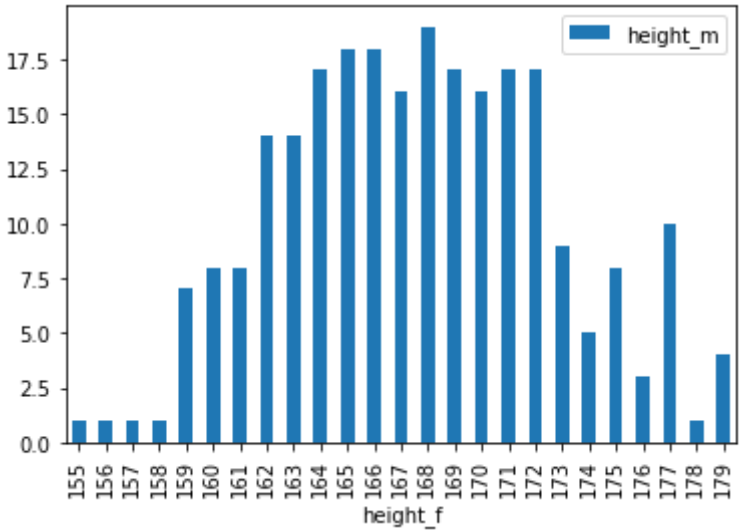
In [43]:
```
gym.groupby('height_m').count().plot(kind='bar')
```

Out[43]: <AxesSubplot:xlabel='height_m'>



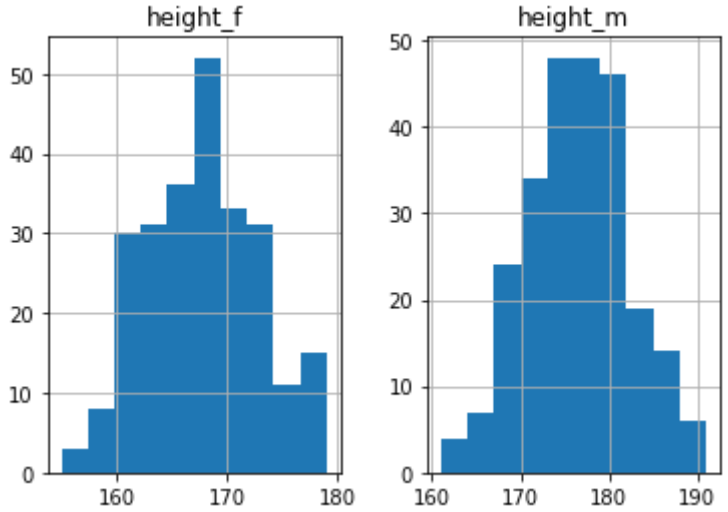
In [44]:
```
gym.groupby('height_f').count().plot.bar()
```

Out[44]:
```
<AxesSubplot:xlabel='height_f'>
```



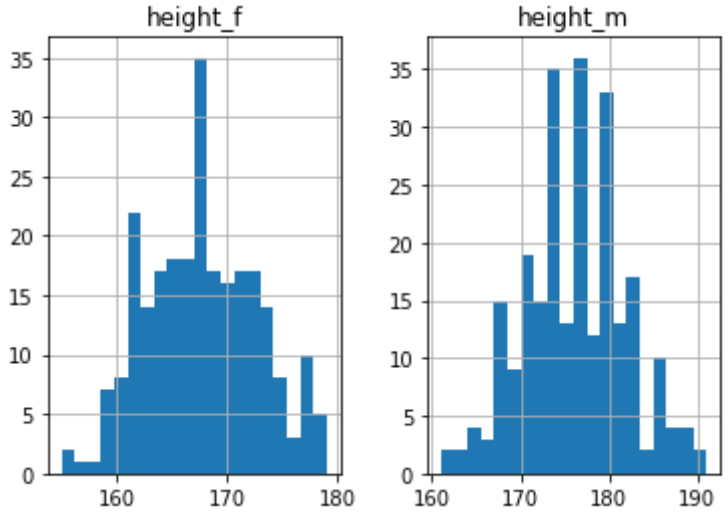
In [45]:
```
gym.hist()
```

Out[45]:
```
array([[<AxesSubplot:title={'center':'height_f'}>,
        <AxesSubplot:title={'center':'height_m'}>]], dtype=object)
```



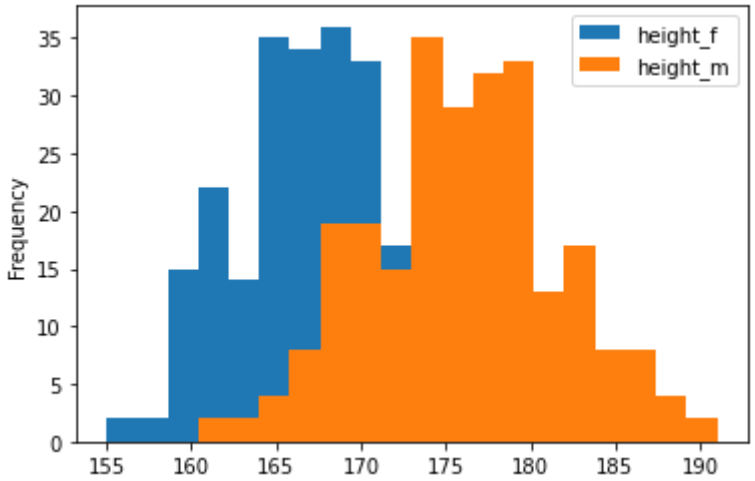
In [46]:
```
gym.hist(bins=20)
```

Out[46]:
```
array([[<AxesSubplot:title={'center':'height_f'}>,
        <AxesSubplot:title={'center':'height_m'}>]], dtype=object)
```



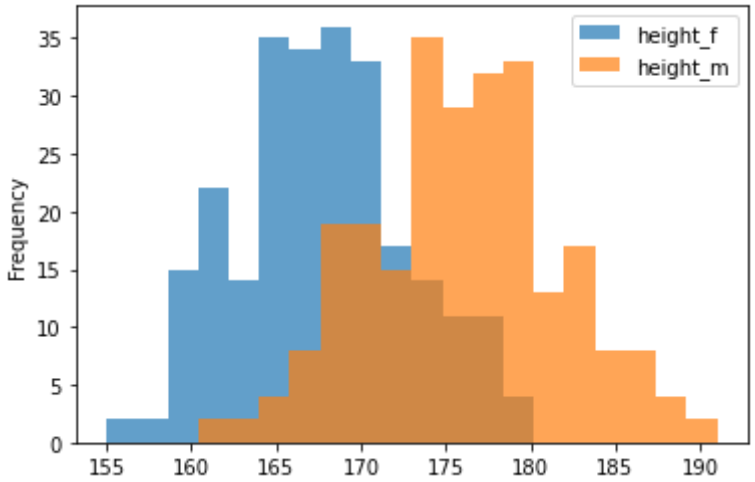
In [47]:
```
gym.plot.hist(bins=20)
```

Out[47]:
```
<AxesSubplot:ylabel='Frequency'>
```



In [48]:
```
gym.plot.hist(bins=20, alpha=0.7)
```

Out[48]: <AxesSubplot:ylabel='Frequency'>



In [ ]:

In [ ]:

In [ ]:

In [ ]:

In [ ]:

In [ ]: