In [1]:
```
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
import seaborn as sns
```

In [8]:
```
df=pd.read_csv("C://Users//DGVC//Downloads//insurance.csv")
```

In [9]:
```
df.head()
```

Out[9]:

	age	sex	bmi	children	smoker	region	charges
0	19	female	27.900	0	yes	southwest	16884.92400
1	18	male	33.770	1	no	southeast	1725.55230
2	28	male	33.000	3	no	southeast	4449.46200
3	33	male	22.705	0	no	northwest	21984.47061
4	32	male	28.880	0	no	northwest	3866.85520

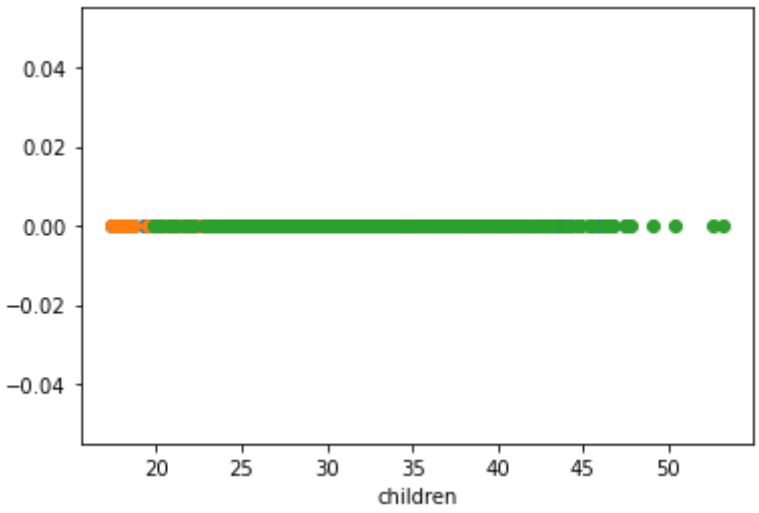
In [12]:
```
df.shape
```

Out[12]:
```
(1338, 7)
```

In [13]:
```
df_southwest=df.loc[df['region']=='southwest']
```

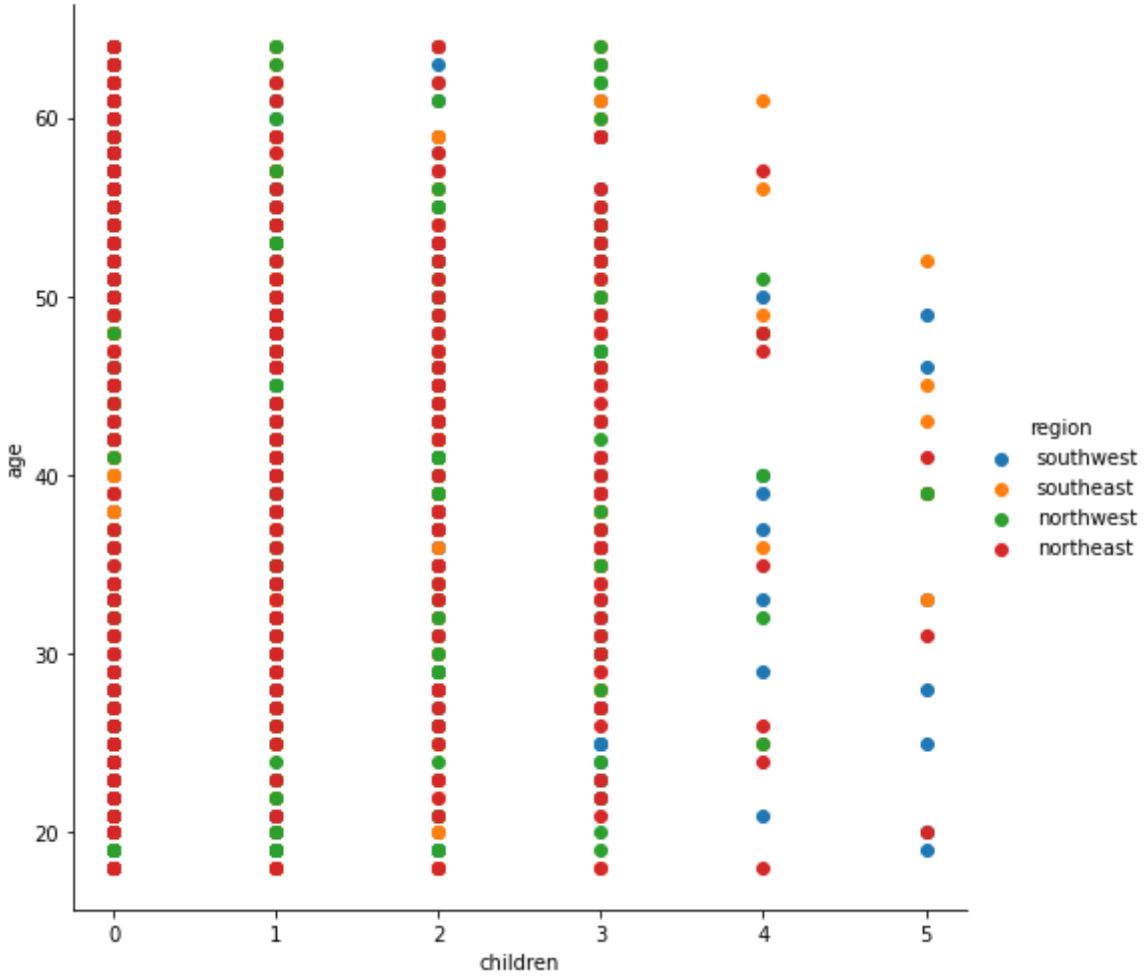
In [16]:
```
df_northwest=df.loc[df['region']=='northwest']
df_southeast=df.loc[df['region']=='southeast']
```

In [23]:
```
plt.plot(df_southwest['bmi'],np.zeros_like(df_southwest['bmi']),'o')
plt.plot(df_northwest['bmi'],np.zeros_like(df_northwest['bmi']),'o')
plt.plot(df_southeast['bmi'],np.zeros_like(df_southeast['bmi']),'o')
plt.xlabel('children')
plt.show()
```



In [21]:
```
sns.FacetGrid(df,hue="region",size=7).map(plt.scatter,"children","age").add_legend()
plt.show()
```

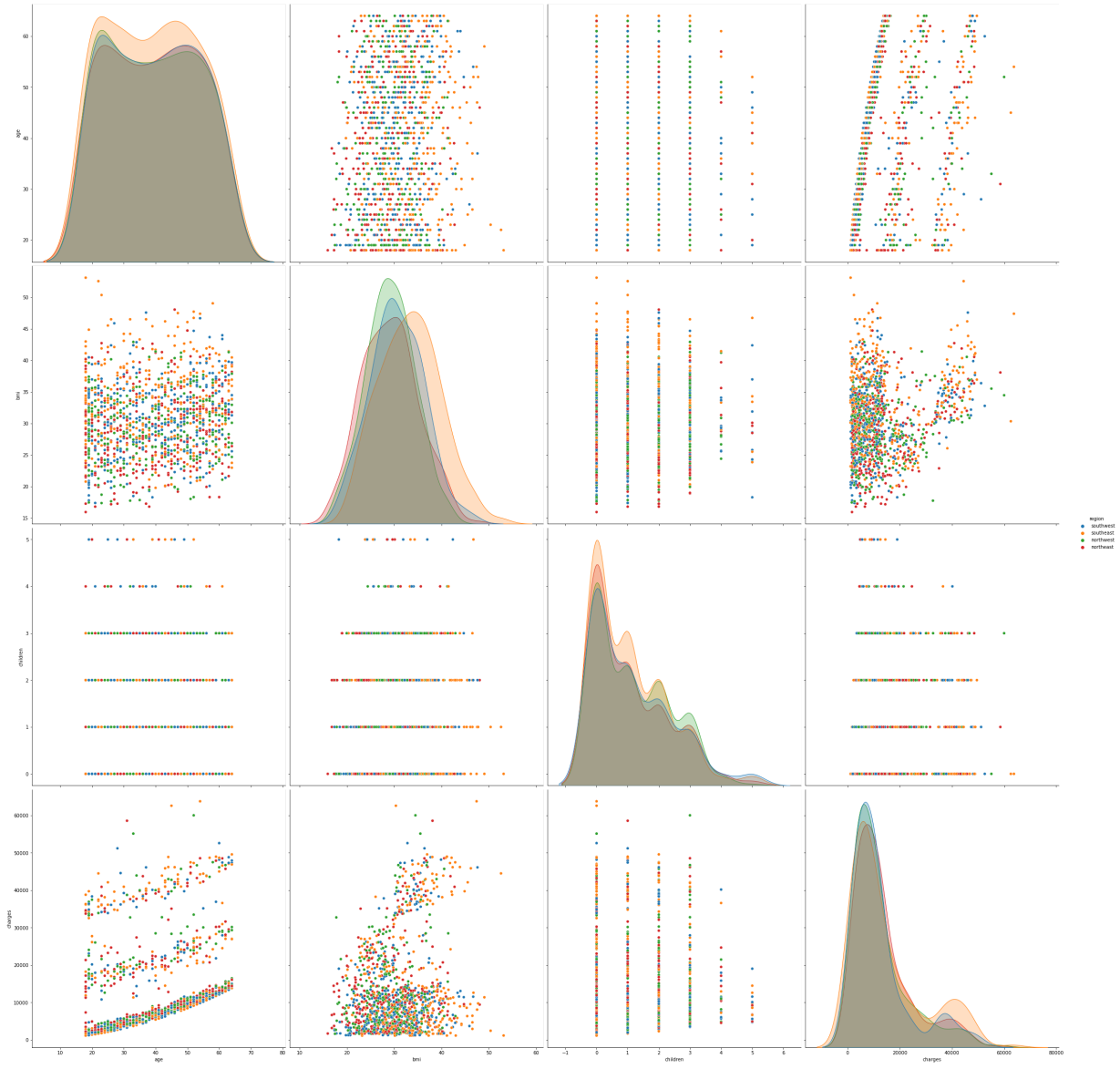
```
C:\Users\DGVC\anaconda3.9\lib\site-packages\seaborn\axisgrid.py:316: UserWarning: Th
e `size` parameter has been renamed to `height`; please update your code.
  warnings.warn(msg, UserWarning)
```



In [20]:
```
sns.pairplot(df,hue="region",size=8)
```

```
C:\Users\DGVC\anaconda3.9\lib\site-packages\seaborn\axisgrid.py:1912: UserWarning: T
he `size` parameter has been renamed to `height`; please update your code.
  warnings.warn(msg, UserWarning)
```

Out[20]:
```
<seaborn.axisgrid.PairGrid at 0x2033d1a2550>
```


age
bmi
children
charges
region
southwest
southeast
northwest
northeast

In [ ]: