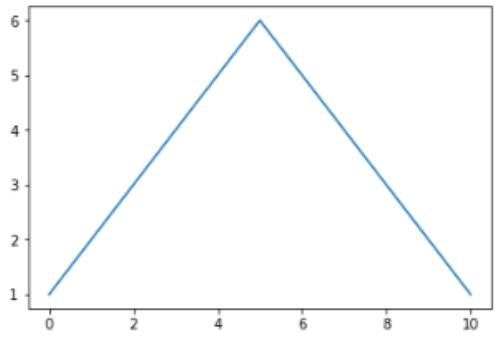
In [2]:
```
import matplotlib.pyplot as plt
```

In [3]:
```
a = [1,2,3,4,5,6,5,4,3,2,1]
```

In [4]:
```
plt.plot(a)
```

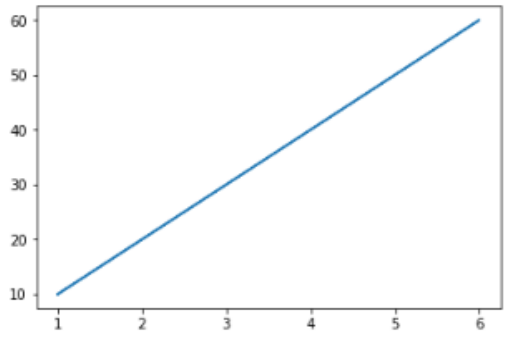
Out[4]:
```
[<matplotlib.lines.Line2D at 0x15fa596bd68>]
```



In [5]:
```
b = [10,20,30,40,50,60,50,40,30,20,10]
```

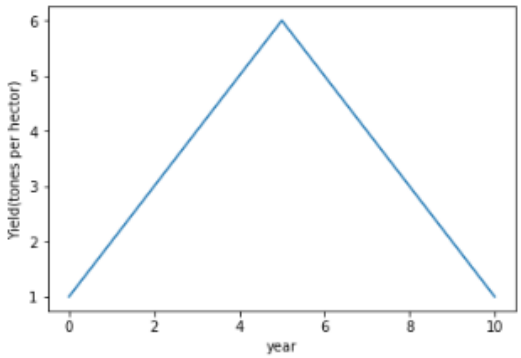
In [6]:
```
plt.plot(a,b)
```

Out[6]:
```
[<matplotlib.lines.Line2D at 0x15fa5c10eb8>]
```

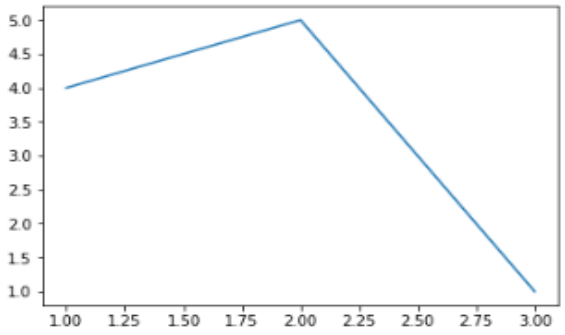


In [7]:
```
plt.xlabel('year')
plt.ylabel('Yield(tones per hector)')
plt.plot(a)
```

Out[7]:
```
[<matplotlib.lines.Line2D at 0x15fa5c7e550>]
```



In [8]:
```
plt.plot([1,2,3],[4,5,1])
plt.show()
```



In [ ]:
```
x = [1,2,3]
y = [10,11,12]
plt.plot(x,y)
plt.title("Line graph")
plt.ylabel('Y axis')
plt.xlabel('X axis')
plt.show()
```

In [20]:
```
import seaborn as sns
```

In [21]:
```
df = sns.load_dataset('titanic')
```

In [27]:
```
df
```

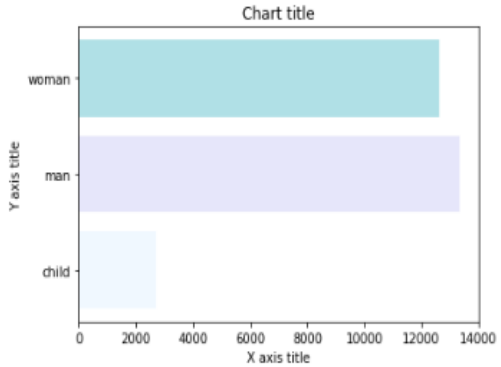
Out[27]:

	who	fare
0	child	2721.2210
1	man	13352.0656
2	woman	12620.6627

using matplotlib

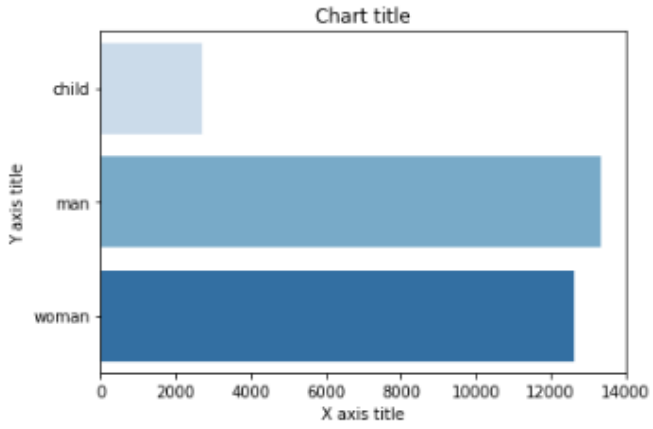
In [28]:
```
df = df.groupby('who')['fare'].sum().to_frame().reset_index()
```

In [31]:
```
plt.barh(df['who'],df['fare'],color = ['#F0F8FF','#E6E6FA','#B0E0E6'])
plt.title('Chart title')
plt.xlabel('X axis title')
plt.ylabel('Y axis title')
plt.show()
```



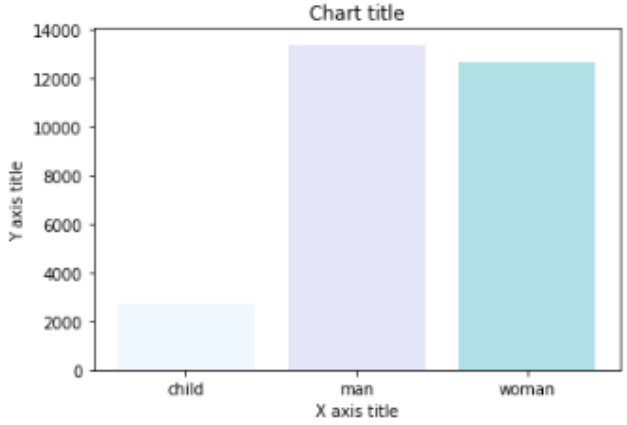
using seaborn

In [32]:
```
import seaborn as sns
sns.barplot(x = 'fare',y = 'who',data = df ,palette = "Blues")
plt.title('Chart title')
plt.xlabel('X axis title')
plt.ylabel('Y axis title')
plt.show()
```

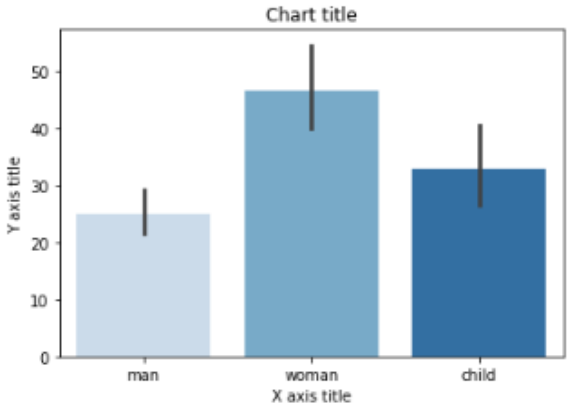


In [34]:
```
#Column chart using Matplotlib
import seaborn as sns
df = sns.load_dataset('titanic')
df=df.groupby('who')['fare'].sum().to_frame().reset_index()
```

In [35]:
```
plt.bar(df['who'],df['fare'],color = ['#F0F8FF','#E6E6FA','#B0E0E6'])
plt.title('Chart title')
plt.xlabel('X axis title')
plt.ylabel('Y axis title')
plt.show()
```

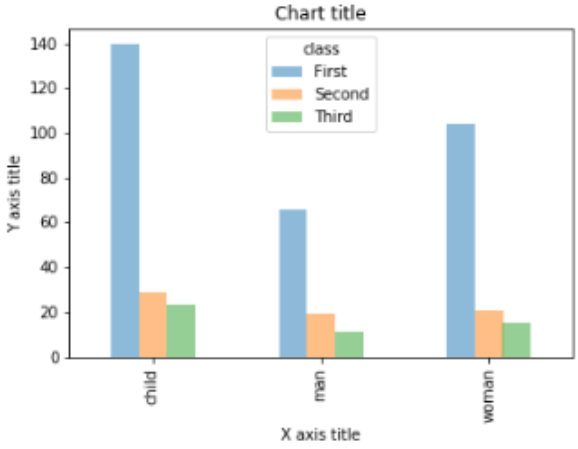


In [39]:
```
#Column chart using Seaborn

titanic_dataset = sns.load_dataset('titanic')
#Creating column chart
sns.barplot(x = 'who',y = 'fare',data = titanic_dataset,palette = "Blues")
plt.title('Chart title')
plt.xlabel('X axis title')
plt.ylabel('Y axis title')
plt.show()
```

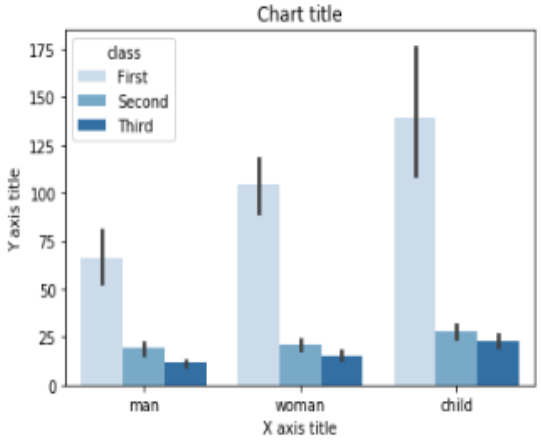


In [47]:
```
#Grouped bar chart using Matplotlib
import matplotlib.pyplot as plt
import pandas as pd
import numpy as np
```

In [48]:
```
df = sns.load_dataset('titanic')
df_pivot = pd.pivot_table(df, values="fare",index="who",columns="class", aggfunc=np.mean)

ax = df_pivot.plot(kind="bar",alpha=0.5)
plt.title('Chart title')
plt.xlabel('X axis title')
plt.ylabel('Y axis title')
plt.show()
```

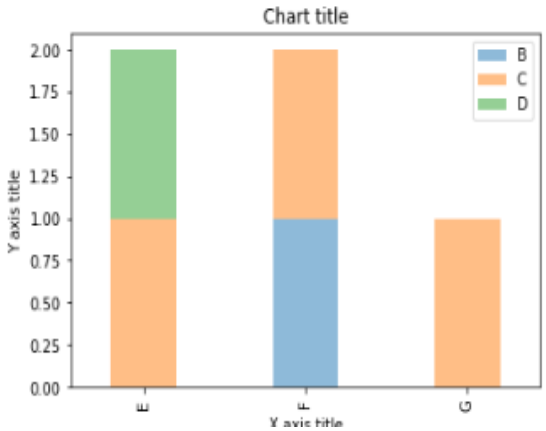


In [50]:
```
#Grouped bar chart using Seaborn

titanic_dataset = sns.load_dataset('titanic')
sns.barplot(x = 'who',y = 'fare',hue = 'class',data = titanic_dataset, palette = "Blues")

plt.title('Chart title')
plt.xlabel('X axis title')
plt.ylabel('Y axis title')
plt.show()
```

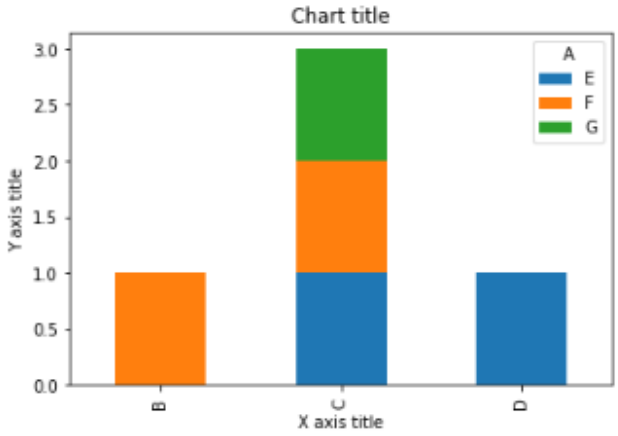


In [51]:
```
df = pd.DataFrame(columns=["A","B", "C","D"],
 data=[["E",0,1,1],
 ["F",1,1,0],
 ["G",0,1,0]])
df.plot.bar(x='A', y=["B", "C","D"], stacked=True, width = 0.4,alpha=0.5)

plt.title('Chart title')
plt.xlabel('X axis title')
plt.ylabel('Y axis title')
plt.show()
```

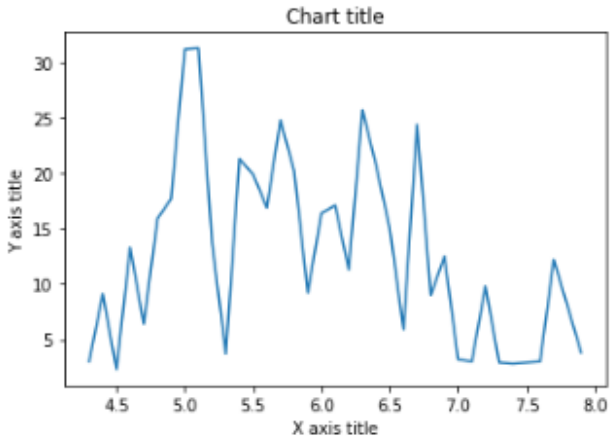
```
C:\Users\HP\Anaconda3\lib\site-packages\pandas\plotting\_core.py:1716: UserWarning: Pandas doesn't allow columns to be created via a new attribute name - see https://pandas.pydata.org/pandas-docs/stable/indexing.html#attribute-access
  series.name = label
```



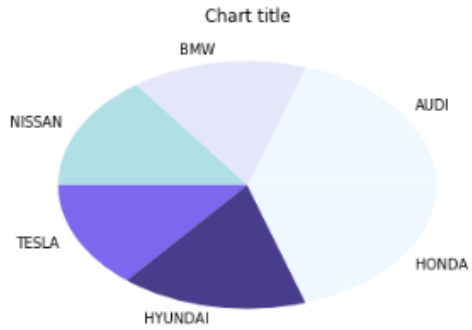
In [54]:
```
dataframe = pd.DataFrame(columns=["A","B", "C","D"],
 data=[["E",0,1,1],["F",1,1,0], ["G",0,1,0]])

dataframe.set_index('A').T.plot(kind='bar', stacked=True)

plt.title('Chart title')
plt.xlabel('X axis title')
plt.ylabel('Y axis title')
plt.show()
```



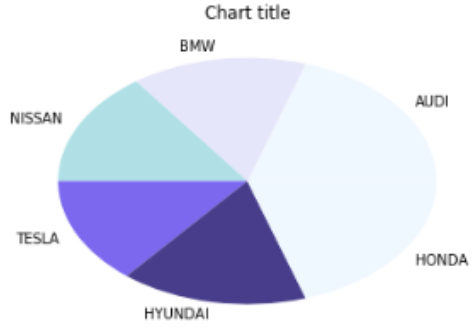
In [55]:
```
#Line chart using Matplotlib

df = sns.load_dataset("iris")
df=df.groupby('sepal_length')['sepal_width'].sum().to_frame().reset_index()

plt.plot(df['sepal_length'], df['sepal_width'])

plt.title('Chart title')
plt.xlabel('X axis title')
plt.ylabel('Y axis title')
plt.show()
```



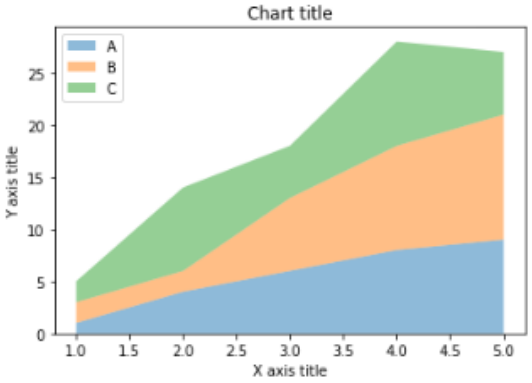
In [57]:
```
#Line chart using Seaborn

cars = ['AUDI', 'BMW', 'NISSAN','TESLA', 'HYUNDAI', 'HONDA']
data = [20, 15, 15, 14, 16, 20]

plt.pie(data, labels = cars,colors = ['#F0F8FF','#E6E6FA','#B0E0E6','#7B68EE','#483D8B'])

plt.title('Chart title')
plt.show()
```



In [59]:
```
#Pie chart using Matplotlib
#Creating the dataset
cars = ['AUDI', 'BMW', 'NISSAN','TESLA', 'HYUNDAI', 'HONDA']
data = [20, 15, 15, 14, 16, 20]

plt.pie(data, labels = cars,colors = ['#F0F8FF','#E6E6FA','#B0E0E6','#7B68EE','#483D8B'])

plt.title('Chart title')
plt.show()
```



In [60]:
```
#Area chart using Matplotlib

x=range(1,6)
y=[ [1,4,6,8,9], [2,2,7,10,12], [2,8,5,10,6] ]

ax = plt.gca()
ax.stackplot(x, y, labels=['A','B','C'],alpha=0.5)
plt.legend(loc='upper left')
plt.title('Chart title')
plt.xlabel('X axis title')
plt.ylabel('Y axis title')
plt.show()
```



In [61]:
```
#Area chart using Seaborn

years_of_experience =[1,2,3]
salary=[ [6,8,10], [4,5,9], [3,5,7] ]

plt.stackplot(years_of_experience,salary, labels=['Company A','Company B','Company C'])
plt.legend(loc='upper left')
plt.title('Chart title')
plt.xlabel('X axis title')
plt.ylabel('Y axis title')
plt.show()
```