

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

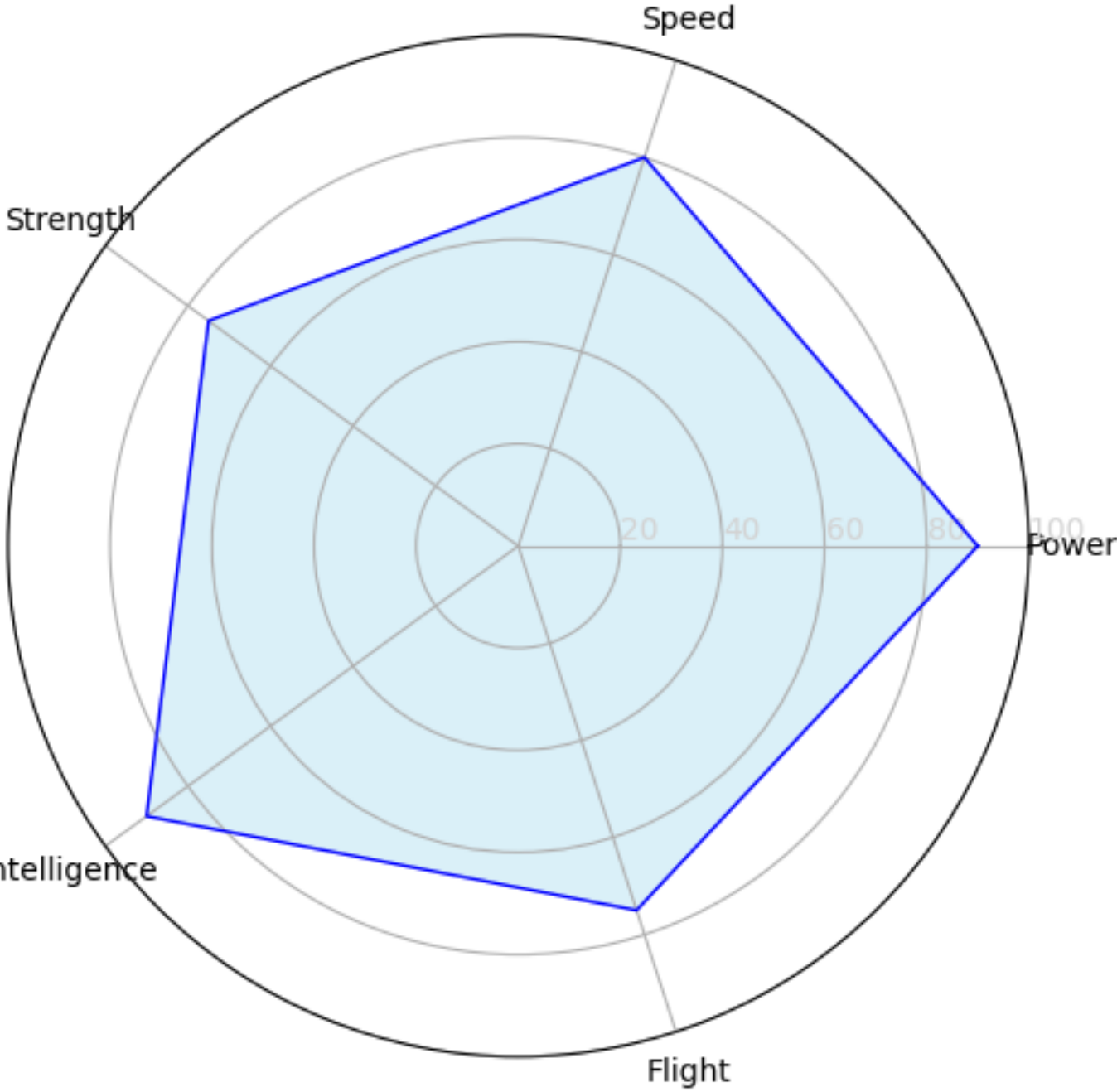
In [45]:  
`# define wonder woman's attributes and values  
attributes = ['Power', 'Speed', 'Strength', 'Intelligence', 'Flight']  
values = [90, 80, 75, 90, 75]  
values += values[:1]  
values`

Out[45]:  
[90, 80, 75, 90, 75, 90]

In [46]:  
`# defines the angles  
angles = np.linspace(0, 2*np.pi, 5, endpoint=False).tolist()  
angles += angles[:1]  
angles`

Out[46]:  
[0.0, 1.2566370614359172, 2.5132741228718345, 3.7699111843077517, 5.026548245743669, 0.0]

In [47]:  
`# initialize the radar plot  
plt.figure(figsize=(6, 6))  
ax = plt.subplot(111, polar=True)  
  
# draw xticks  
plt.xticks(angles[:-1], attributes)  
  
# draw yticks  
ax.set_rlabel_position(0)  
plt.yticks([20, 40, 60, 80, 100], ['20', '40', '60', '80', '100'], color='lightgrey', size=10)  
plt.ylim(0, 100)  
  
# plot data  
ax.plot(angles, values, linewidth=1, linestyle='solid', color='blue')  
ax.fill(angles, values, alpha=0.3, facecolor='skyblue')  
  
plt.show()`



In [49]:  
`# define products, their attributes, and values  
categories = ['Utility', 'Price', 'Durability']  
product_a = [4, 8, 10]  
product_b = [2, 9, 6]  
product_a += product_a[:1]  
product_b += product_b[:1]`

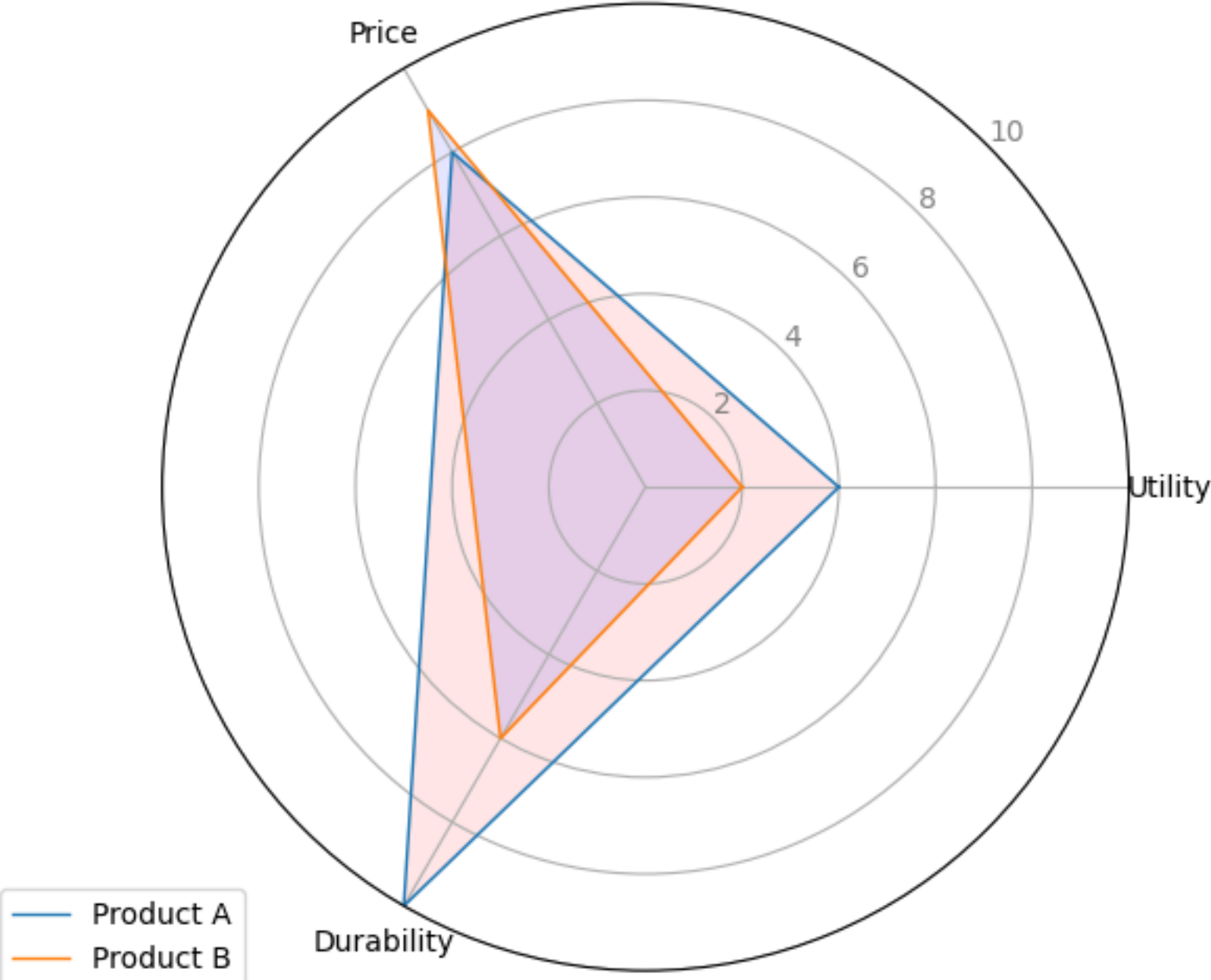
In [50]:  
`print(product_a)  
print(product_b)`

[4, 8, 10, 4]  
[2, 9, 6, 2]

In [51]:  
`prod_angles = np.linspace(0, 2*np.pi, 3, endpoint=False).tolist()  
prod_angles += prod_angles[:1]  
prod_angles`

Out[51]:  
[0.0, 2.0943951023931953, 4.1887902047863905, 0.0]

In [64]:  
`# initialize the radar plot  
plt.figure(figsize=(6, 6))  
ax = plt.subplot(111, polar=True)  
  
# xticks  
plt.xticks(prod_angles[:-1], categories)  
# yticks  
ax.set_rlabel_position(45)  
plt.yticks([2, 4, 6, 8, 10], ['2', '4', '6', '8', '10'], color='grey', size=10)  
plt.ylim(0, 10)  
# plot data  
ax.plot(prod_angles, product_a, linewidth=1, linestyle='solid', label='Product A')  
ax.fill(prod_angles, product_a, alpha=0.1, facecolor='red')  
  
ax.plot(prod_angles, product_b, linewidth=1, linestyle='solid', label='Product B')  
ax.fill(prod_angles, product_b, alpha=0.1, facecolor='blue')  
plt.legend(loc='upper right', bbox_to_anchor=(0.1, 0.1))  
plt.show()`



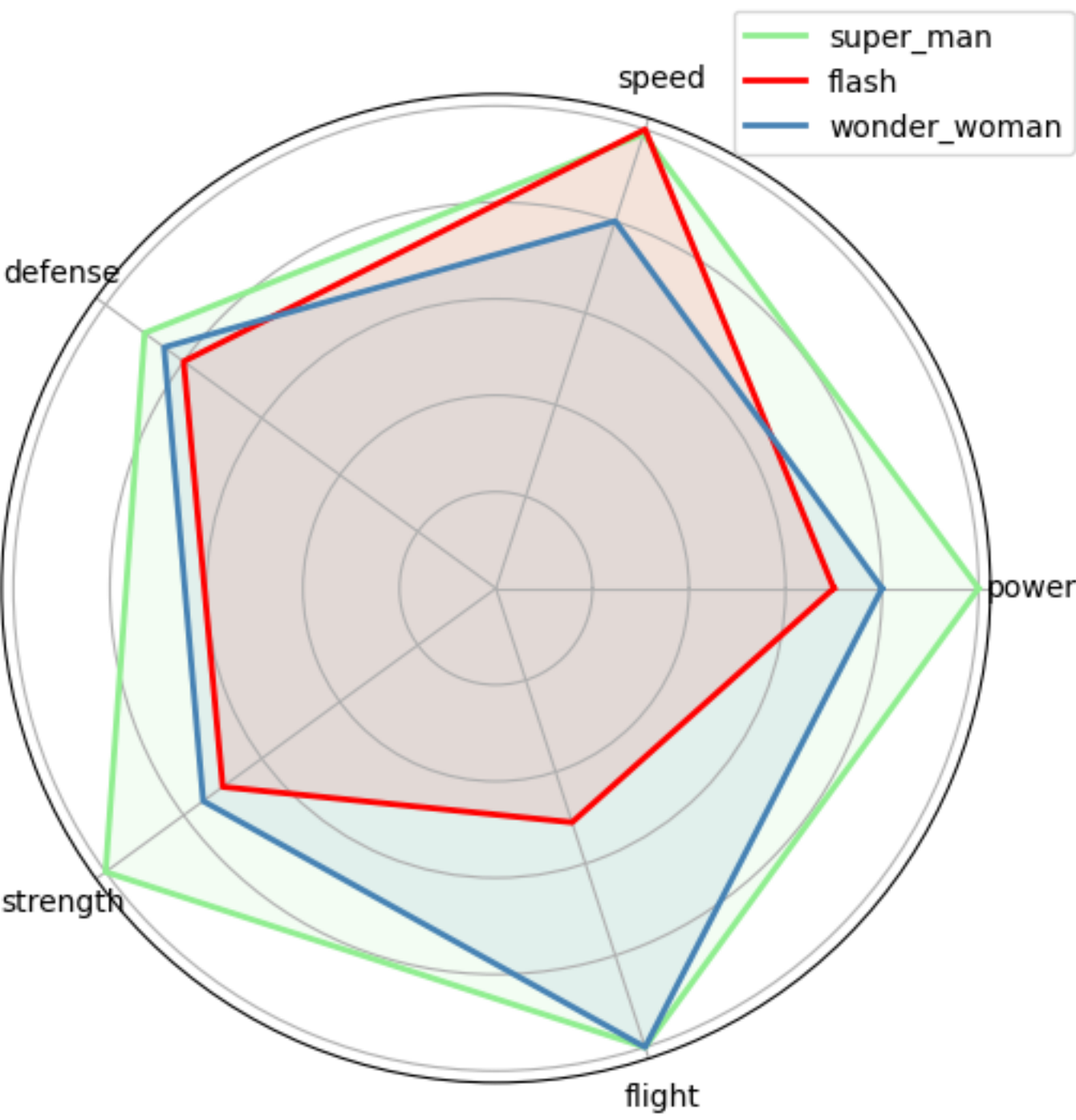
In [65]:  
`df = pd.read_csv('hero_profile.csv')  
df`

Out[65]:

	hero	power	speed	defense	strength	flight
0	super_man	100	99	90	100	100
1	flash	70	100	80	70	51
2	wonder_woman	80	80	85	75	100

In [66]:  
`def my_radar_chart(hero_data):  
 labels = np.array(['power', 'speed', 'defense', 'strength', 'flight'])  
 num_vars = len(labels)  
 # define angles  
 angles = np.linspace(0, 2*np.pi, num_vars, endpoint=False).tolist()  
 angles += angles[:1]  
 # initialize radar plot  
 fig, ax = plt.subplots(figsize=(6,6), subplot_kw=dict(polar=True))  
  
 # define the colors  
 colors = ['lightgreen', 'red', 'steelblue']  
  
 # plot each hero's data with distinct color  
 for index, (row, color) in enumerate(zip(hero_data.iterrows(), colors)):  
 hero_name = row[1]['hero']  
 stats = row[1].drop('hero').values  
 stats = np.concatenate((stats, [stats[0]]))  
  
 ax.plot(angles, stats, linewidth=2, label=hero_name, color=color)  
 ax.fill(angles, stats, alpha=0.1, color=color)  
  
 ax.set_xticks(angles[:-1])  
 ax.set_xticklabels(labels)  
 ax.set_yticklabels([])  
 plt.legend(loc='upper right', bbox_to_anchor=(1.1, 1.1))  
  
 return fig, ax`

In [67]:  
`fig, ax = my_radar_chart(df)`



In [ ]: