In [3]:

```
import pandas as pd
import matplotlib.pyplot as plt
df = pd.read_csv('pokemon_data.csv', index_col ="Name")
print(df.head(5))
```

```
                     # Type 1  Type 2  HP  Attack  Defense  Sp. Atk  \
Name
Bulbasaur            1  Grass  Poison  45      49       49       65
Ivysaur              2  Grass  Poison  60      62       63       80
Venusaur             3  Grass  Poison  80      82       83      100
VenusaurMega Venusaur  3  Grass  Poison  80     100      123      122
Charmander           4   Fire     NaN  39      52       43       60

                     Sp. Def  Speed  Generation  Legendary
Name
Bulbasaur                 65     45           1      False
Ivysaur                   80     60           1      False
Venusaur                 100     80           1      False
VenusaurMega Venusaur    120     80           1      False
Charmander                50     65           1      False
```

In [4]:

```
k=df.sort_values(by=['HP'],ascending=False)
k.head(5)
```

Out[4]:

Name	#	Type 1	Type 2	HP	Attack	Defense	Sp. Atk	Sp. Def	Speed	Generation	Legendar
Blissey	242	Normal	NaN	255	10	10	75	135	55	2	Fals
Chansey	113	Normal	NaN	250	5	5	35	105	50	1	Fals
Wobbuffet	202	Psychic	NaN	190	33	58	33	58	33	2	Fals
Wailord	321	Water	NaN	170	90	45	90	45	60	3	Fals
Alomomola	594	Water	NaN	165	75	80	40	45	65	5	Fals

In [5]:

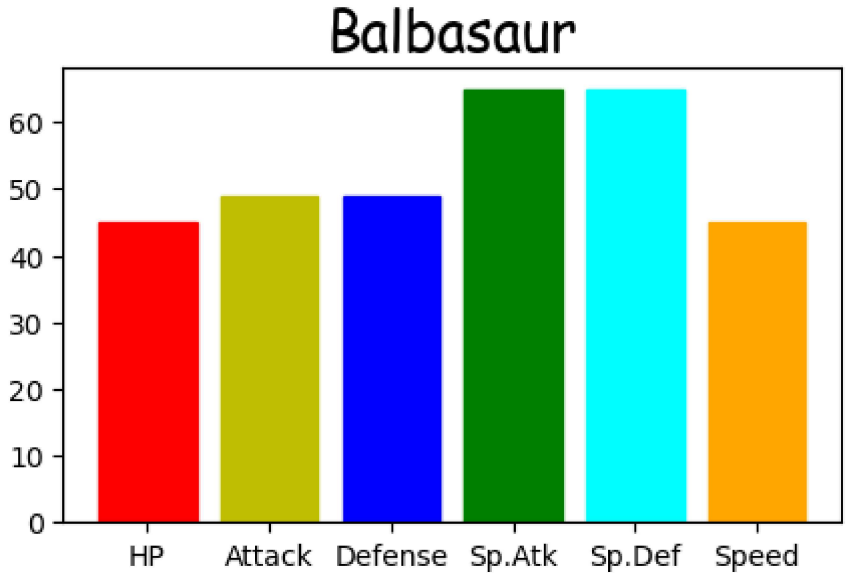
```
df["Total"]=df.iloc[:,4:10].sum(axis=1)
df.head(5)
```

Out[5]:

Name	#	Type 1	Type 2	HP	Attack	Defense	Sp. Atk	Sp. Def	Speed	Generation	Legendar
Bulbasaur	1	Grass	Poison	45	49	49	65	65	45	1	Fals
Ivysaur	2	Grass	Poison	60	62	63	80	80	60	1	Fals
Venusaur	3	Grass	Poison	80	82	83	100	100	80	1	Fals
VenusaurMega Venusaur	3	Grass	Poison	80	100	123	122	120	80	1	Fals
Charmander	4	Fire	NaN	39	52	43	60	50	65	1	Fals

In [42]:

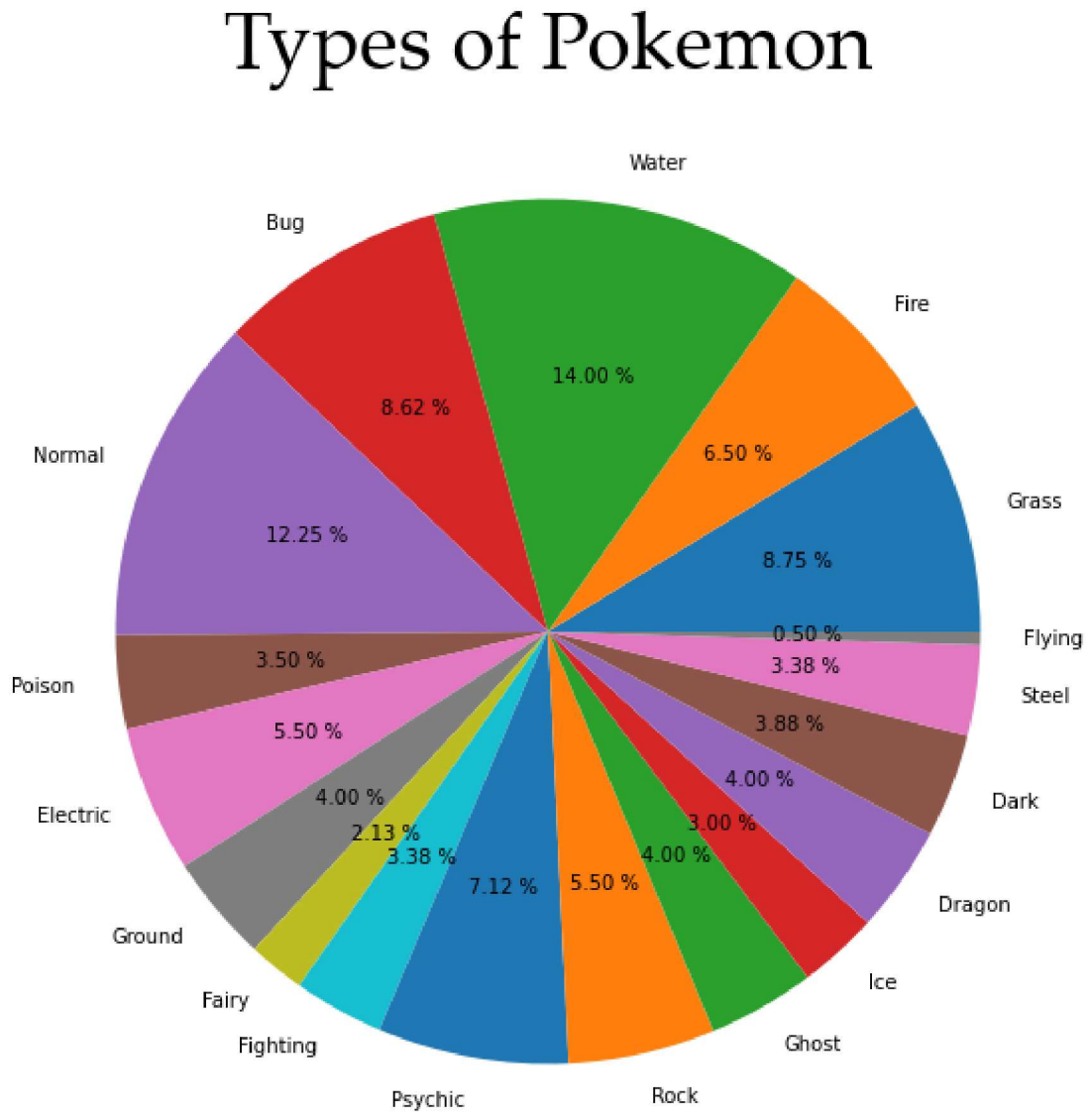
```
row=df.loc["Bulbasaur"]

labels=["HP",'Attack','Defense','Sp.Atk','Sp.Def','Speed']
values=[]
for i in range(3,9):
    values.append(row[i])
plt.figure(figsize=(5,3), dpi=100)
plt.title('Balbasaur', fontdict={'fontname': 'Comic Sans MS', 'fontsize': 20})

bars = plt.bar(labels, values)
color=["r","y","b","g","cyan","orange"]
patterns = ['/','O','*','-','x','.']
for i in range(6):
    bars[i].set_color(color[i])
plt.show()
```



TYPES

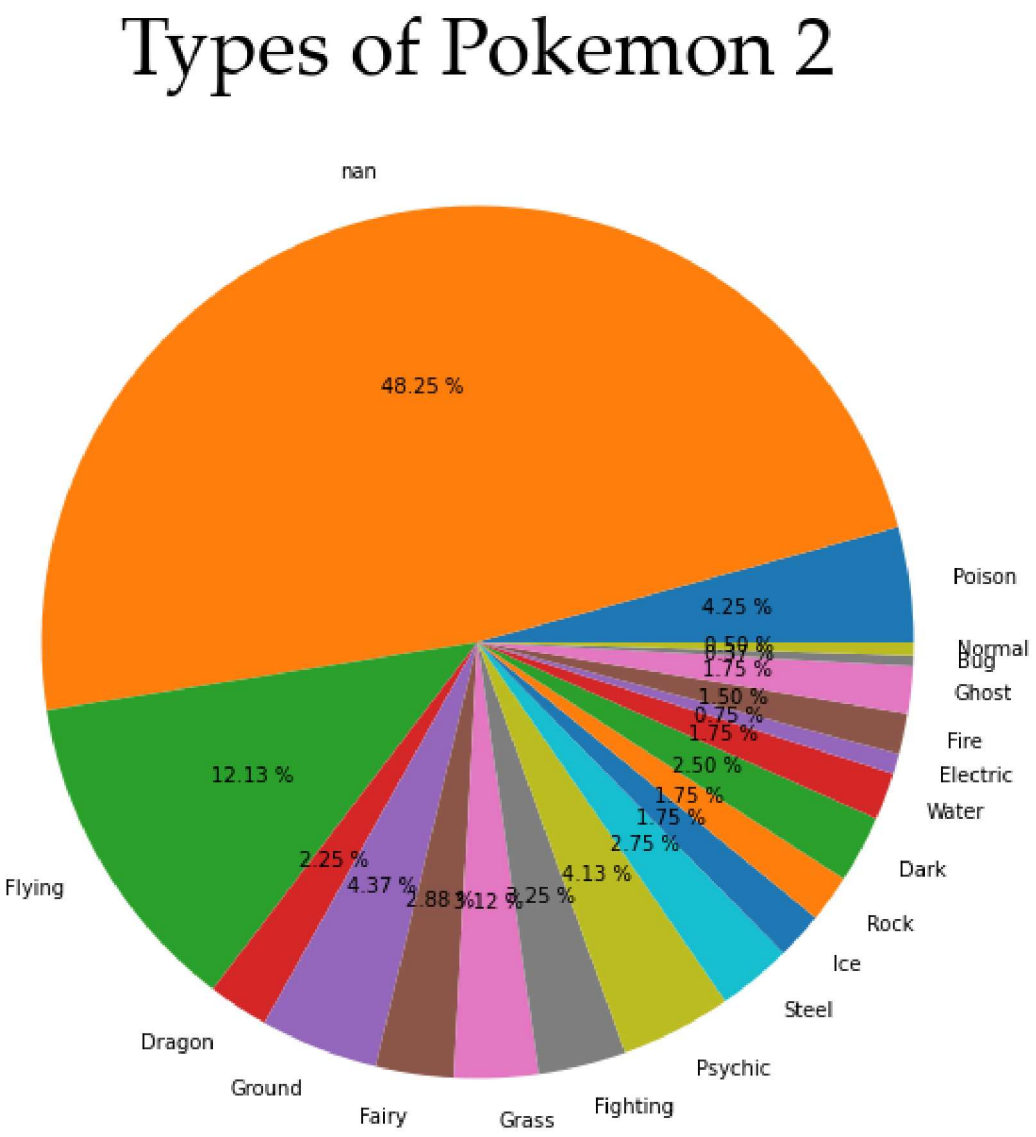
In [37]:

```
d={}
plt.figure(figsize=(16,10))
for i in df["Type 1"]:
    if i in d:
        d[i]=d[i]+1
    else:
        d[i]=1
plt.title('Types of Pokemon', fontdict={'fontname': 'Palatino Linotype', 'fontsize': 40})

v=list(d.values())
l=list(d.keys())
plt.pie(v, labels=l, autopct='%.2f %%')
plt.show()
```



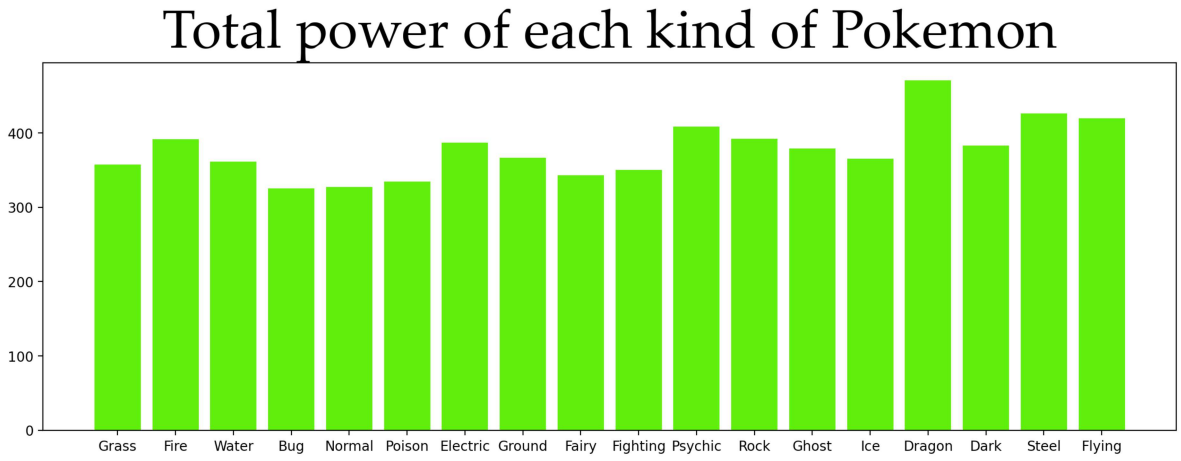
In [15]:

```
d1={}
plt.figure(figsize=(16,10))
for i in df["Type 2"]:
    if i in d1:
        d1[i]=d1[i]+1
    else:
        d1[i]=1
plt.title('Types of Pokemon 2', fontdict={'fontname': 'Palatino Linotype', 'fontsize': 40})

v1=list(d1.values())
l1=list(d1.keys())
plt.pie(v1, labels=l1, autopct='%.2f %%')
plt.show()
```



In [36]:

```
s={}
for i in range(len(df["Type 1"])):
    k=df["Type 1"][i]
    if k in d:
        if k not in s:
            s[k]=df["Total"][i]/d[k]
        else:
            s[k]=s[k]+df["Total"][i]/d[k]


plt.figure(figsize=(15,5), dpi=200)
lab1=list(s.keys())
val1=list(s.values())
bars1 = plt.bar(lab1, val1, color='#61f00e')
plt.title('Total power of each kind of Pokemon', fontdict={'fontname': 'Palatino Linotype',
plt.show()
```



In [ ]: