What are the most powerful Pokemon of each generation?

First, let's make sure have downloaded the dataset of Pokemon and remember its location

```
In [14]:  # Common imports
          import torch
          import numpy as np
          import pandas as pd
```

In the next code line you must change the location of the dataframe, remember where you saved it

```
In [15]:  # Load our dataset
          dataframe = pd.read_csv('C:/Users/estiv/OneDrive/Desktop/datasets_121_280_Pokemon.csv')
```

```
In [16]:  # We are going to make a subset of the information that interest us
          subset = dataframe[['Total', 'Generation']]
```

```
In [17]:  # Create the tensor with our values
          pokemoninfo = torch.tensor(subset.values).float()
          pokemonNames = dataframe['Name']
```

```
In [18]:  # Get information about the power of our Pokemon, the total power is in the first column
          data = pokemoninfo[:, 0]
```

```
In [19]:  # Likewise, get generation information
          generation = pokemoninfo[:, 1]
```

```
In [20]:  # Calculate the mean due to we need to know what is the score of the average pokemon
          mean = torch.mean(data, dim=0)
```

```
In [21]:  # Calculate the standard deviation to find out how dispersed the data is relative to the mea
          n
          std = torch.std(data, dim=0)
```

```
In [22]:  # We need to separate the generations
          firstGeneration = pokemoninfo[torch.eq(generation, 1)]
          secondGeneration = pokemoninfo[torch.eq(generation, 2)]
          thirdGeneration = pokemoninfo[torch.eq(generation, 3)]
          fourthGeneration = pokemoninfo[torch.eq(generation, 4)]
          fifthGeneration = pokemoninfo[torch.eq(generation, 5)]
          sixthGeneration = pokemoninfo[torch.eq(generation, 6)]

          firstLength = 0
          secondLength = firstGeneration.shape[0]
          thirdLength = secondGeneration.shape[0] + secondLength
          fourthLength = thirdGeneration.shape[0] + thirdLength
          fifthLength = fourthGeneration.shape[0] + fourthLength
          sixthLength = firstGeneration.shape[0] + fifthLength
```

```
In [23]:  # Identify our Pokemon with high level
          highScore = mean + std
```

```
In [24]:  # Create the function for organize the data
          def organize(strongPokemon, rowGeneration):

              boolTensor = torch.tensor(torch.ge(strongPokemon[:, 0], highScore))
              positionList = []

              for position, item in enumerate(boolTensor):
                  if item == True:
                      positionList.append(position)

              # Print the names of Pokemon with respective data (power and generation)
              length = strongPokemon.shape[0]
              for i, args in enumerate(zip(pokemonNames[rowGeneration:rowGeneration + length], strongP
          okemon[0:length, 0], strongPokemon[0:length, 1])):

                  for j in positionList:
                      if i == j:
                          print('{:25} {:6.2f} {:6.2f}'.format(*args))
```

Finally, the most powerful Pokemon of each generation are...

```
In [29]:  print('------First generation-------')
          organize(firstGeneration, firstLength)
          print('------Second generation-------')
          organize(secondGeneration, secondLength)
          print('------Third generation-------')
          organize(thirdGeneration, thirdLength)
          print('------Fourth generation-------')
          organize(fourthGeneration, fourthLength)
          print('------Fifth generation-------')
          organize(fifthGeneration, fifthLength)
          print('------Sixth generation-------')
          organize(sixthGeneration, sixthLength)
```
```
          ------First generation-------
          VenusaurMega Venusaur      625.00   1.00
          CharizardMega Charizard X  634.00   1.00
          CharizardMega Charizard Y  634.00   1.00
          BlastoiseMega Blastoise    630.00   1.00
          PidgeotMega Pidgeot        579.00   1.00
          AlakazamMega Alakazam      590.00   1.00
          SlowbroMega Slowbro        590.00   1.00
          GengarMega Gengar          600.00   1.00
          KangaskhanMega Kangaskhan  590.00   1.00
          PinsirMega Pinsir          600.00   1.00
          GyaradosMega Gyarados      640.00   1.00
          AerodactylMega Aerodactyl  615.00   1.00
          Articuno                   580.00   1.00
          Zapdos                     580.00   1.00
          Moltres                    580.00   1.00
          Dragonite                  600.00   1.00
          Mewtwo                     680.00   1.00
          MewtwoMega Mewtwo X        780.00   1.00
          MewtwoMega Mewtwo Y        780.00   1.00
          Mew                        600.00   1.00
          ------Second generation-------
          AmpharosMega Ampharos      610.00   2.00
          SteelixMega Steelix        610.00   2.00
          ScizorMega Scizor          600.00   2.00
          HeracrossMega Heracross    600.00   2.00
          HoundoomMega Houndoom      600.00   2.00
          Raikou                     580.00   2.00
          Entei                      580.00   2.00
          Suicune                    580.00   2.00
          Tyranitar                  600.00   2.00
          TyranitarMega Tyranitar    700.00   2.00
          Lugia                      680.00   2.00
          Ho-oh                      680.00   2.00
          Celebi                     600.00   2.00
          ------Third generation-------
          SceptileMega Sceptile      630.00   3.00
          BlazikenMega Blaziken      630.00   3.00
          SwampertMega Swampert      635.00   3.00
          GardevoirMega Gardevoir    618.00   3.00
          Slaking                    670.00   3.00
          AggronMega Aggron          630.00   3.00
          ManectricMega Manectric    575.00   3.00
          SharpedoMega Sharpedo      560.00   3.00
          CameruptMega Camerupt      560.00   3.00
          AltariaMega Altaria        590.00   3.00
          AbsolMega Absol            565.00   3.00
          GlalieMega Glalie          580.00   3.00
          Salamence                  600.00   3.00
          SalamenceMega Salamence    700.00   3.00
          Metagross                  600.00   3.00
          MetagrossMega Metagross    700.00   3.00
          Regirock                   580.00   3.00
          Regice                     580.00   3.00
          Registeel                  580.00   3.00
          Latias                     600.00   3.00
          LatiasMega Latias          700.00   3.00
          Latios                     600.00   3.00
          LatiosMega Latios          700.00   3.00
          Kyogre                     670.00   3.00
          KyogrePrimal Kyogre        770.00   3.00
          Groudon                    670.00   3.00
          GroudonPrimal Groudon      770.00   3.00
          Rayquaza                   680.00   3.00
          RayquazaMega Rayquaza      780.00   3.00
          Jirachi                    600.00   3.00
          DeoxysNormal Forme         600.00   3.00
          DeoxysAttack Forme         600.00   3.00
          DeoxysDefense Forme        600.00   3.00
          DeoxysSpeed Forme          600.00   3.00
          ------Fourth generation-------
          LopunnyMega Lopunny        580.00   4.00
          Garchomp                   600.00   4.00
          GarchompMega Garchomp      700.00   4.00
          LucarioMega Lucario        625.00   4.00
          AbomasnowMega Abomasnow    594.00   4.00
          GalladeMega Gallade        618.00   4.00
          Uxie                       580.00   4.00
          Mesprit                    580.00   4.00
          Azelf                      580.00   4.00
          Dialga                     680.00   4.00
          Palkia                     680.00   4.00
          Heatran                    600.00   4.00
          Regigigas                  670.00   4.00
          GiratinaAltered Forme      680.00   4.00
          GiratinaOrigin Forme       680.00   4.00
          Cresselia                  600.00   4.00
          Manaphy                    600.00   4.00
          Darkrai                    600.00   4.00
          ShayminLand Forme          600.00   4.00
          ShayminSky Forme           600.00   4.00
          Arceus                     720.00   4.00
          ------Fifth generation-------
          Victini                    600.00   5.00
          Archeops                   567.00   5.00
          Hydreigon                  600.00   5.00
          Cobalion                   580.00   5.00
          Terrakion                  580.00   5.00
          Virizion                   580.00   5.00
          TornadusIncarnate Forme    580.00   5.00
          TornadusTherian Forme      580.00   5.00
          ThundurusIncarnate Forme   580.00   5.00
          ThundurusTherian Forme     580.00   5.00
          Reshiram                   680.00   5.00
          Zekrom                     680.00   5.00
          LandorusIncarnate Forme    600.00   5.00
          LandorusTherian Forme      600.00   5.00
          Kyurem                     660.00   5.00
          KyuremBlack Kyurem         700.00   5.00
          KyuremWhite Kyurem         700.00   5.00
          KeldeoOrdinary Forme       580.00   5.00
          KeldeoResolute Forme       580.00   5.00
          MeloettaAria Forme         600.00   5.00
          MeloettaPirouette Forme    600.00   5.00
          Genesect                   600.00   5.00
          ------Sixth generation-------
          Klefki                     600.00   6.00
          Yveltal                    680.00   6.00
          Zygarde50% Forme           600.00   6.00
          Diancie                    600.00   6.00
          DiancieMega Diancie        600.00   6.00
          HoopaHoopa Confined        700.00   6.00
          HoopaHoopa Unbound         600.00   6.00
```