

Base pokemons

Exemple de format, le code à copier/coller est plus loin :

```
db.Pokemon.insert([{\n  "id": 1,\n  "name": {\n    "english": "Bulbasaur",\n    "japanese": "フシギダネ",\n    "chinese": "妙蛙种子"\n  },\n  "type": [\n    "Grass",\n    "Poison"\n  ],\n  "base": {\n    "HP": 45,\n    "Attack": 49,\n    "Defense": 49,\n    "Sp. Attack": 65,\n    "Sp. Defense": 65,\n    "Speed": 45\n  }\n},\n{\n  "id": 2,\n  "name": {\n    "english": "Ivysaur",\n    "japanese": "フシギソウ",\n    "chinese": "妙蛙草"\n  },\n  "type": [\n    "Grass",\n    "Poison"\n  ],\n  "base": {\n    "HP": 60,\n    "Attack": 62,\n    "Defense": 63,\n    "Sp. Attack": 80,
```

```
    "Sp. Defense": 80,  
    "Speed": 60  
  }  
},  
etc..
```

Code à copier/coller pour les bases

```
db.pokemons.insertMany(  
  
  { name: 'Tadmorv', type: ['Poison'], attacks: [ { name: 'Acid', damages: 60 }, { name: 'Detritus', damages: 65 } ], hp: 120,  
    level: 25 },  
  
  { name: 'Ronflex', type: ['Normal'], attacks: [ { name: 'Repos' }, { name: 'Plaquage', damages: 85 } ], hp: 250, level: 35 },  
  
  { name: 'Salameche', type: ['Feu'], attacks: [ { name: 'Flammeche', damages: 40 }, { name: 'Charge', damages: 40 } ], hp: 40,  
    level: 12 },  
  
  { name: 'Ectoplasma', type: ['Spectre', 'Poison'], attacks: [ { name: 'Hypnose', damages: 53 }, { name: 'Léchouille', damages:  
150 } ], hp: 150, level: 50 },  
  
  { name: 'Canarticho', type: ['Normal', 'Vol'], attacks: [ { name: 'Picpic', damages: 13 }, { name: 'Jet de Sable', damages: 2 } ],  
    hp: 80, level: 13 },  
  
  { name: 'Magmar', type: ['Feu', 'Moche'], attacks: [ { name: 'Lance Flamme', damages: 120 }, { name: 'Griffe', damages: 40 }  
], hp: 22, level: 12 }  
  
]);
```

```
db.trainers.insertMany(  
  
  { name: 'Sasha', sexe: 'Male', birthDate: new Date('31/12/2000'), badges: ['Roche', 'Eau', 'Feu', 'Plante', 'Foudre'],  
    nbPokemons: 42 },  
  
  { name: 'Ondine', sexe: 'Female', birthDate: new Date('15/09/1999'), badges: ['Plante', 'Eau', 'Feu', 'Psy'], nbPokemons: 35 },  
  
  { name: 'Pierre', sexe: 'Male', birthDate: new Date('15/09/1989'), badges: ['Glace'], nbPokemons: 4 },  
  
  { name: 'Jean michel', sexe: 'Female', birthDate: new Date('15/09/2015'), badges: [], nbPokemons: 12 },  
  
  { name: 'Jean bob mauvais badges', sexe: 'Male', birthDate: new Date('12/09/2012'), badges: 'lol', nbPokemons: 7 }  
  
]);
```

```
db.cities.insertMany(  

```

```

    { name: 'Jadielle', champion: 'Giovanni', position: '50.40', pokemons: [{ name: 'Persian' }, { name: 'Triopikeur' }, { name:
'Nidoking' }] },

    { name: 'Carmin Sur Mer', champion: 'Bob', position: '120.12', pokemons: [{ name: 'Raichu' }, { name: 'Pikachu' }, { name:
'Voltorbe' }] },

    { name: 'Safrania', champion: 'Morgane', position: '-50.63', pokemons: [{ name: 'Alakazham' }, { name: 'Aeromite' }, { name:
'Mr Mime' }] },

    { name: 'Safrania', champion: 'Morgane', position: '-50.63', pokemons: [{ name: 'Alakazham' }, { name: 'Aeromite' }, { name:
'Mr Mime' }] },

    { name: 'Parmanie', champion: 'Koga', position: '45.110', pokemons: [{ name: 'Smogo' }, { name: 'Grotadmorv' }, { name:
'Smogogo' }] },

    { name: 'Azuria', champion: 'Ondine', position: '4.10', pokemons: [{ name: 'Staross' }, { name: 'Poissirene' }, { name: 'Stari'
}]
}
]);

```

Codes des corrections

```

// Récupérer tout les pokemons

db.pokemons.find()

// Affichage plus joli

db.pokemons.find().pretty()

// Récupérer tous les dresseurs masculins

db.trainers.find( { sexe : 'Male' } ).pretty()

// Récupérer tous les pokemons de type feu

```

```
db.pokemons.find( { type : 'Feu' } ).pretty()
```

```
// Retourne les dresseurs dont le nombre de poke = 42
```

```
db.trainers.find( { nbPokemons : 42 } ).pretty()
```

```
// Compte le nombre de dresseurs dont le nombre de poke = 42
```

```
db.trainers.count( { nbPokemons : 42 } )
```

```
// Retourne les dresseurs dont le nombre de poke >= 10 // Greater Than or Equal
```

```
db.trainers.find( { nbPokemons : { $gte : 30 } } ).pretty()
```

```
// Récupérer toutes les dresseuses (sexe féminin) qui ont plus de 10 pokémons
```

```
db.trainers.find(
```

```
{
```

```
  $and: [
```

```
    { nbPokemons : { $gte : 10 } },
```

```
    { sexe : 'Female' }
```

```
  ]
```

```
}
```

```
).pretty()
```

```
// Compte le nombre de badges d'un dresseurs
db.trainers.aggregate([
  {
    $project: {
      item: 1,
      numberOfBadges: { $cond: { if: { $isArray: "$badges" }, then: { $size: "$badges" }, else: "NA" } }
    }
  }
])
```

```
// Récupérer tous les dresseurs qui possèdent au moins 3 badges
```

```
// https://docs.mongodb.com/manual/reference/operator/aggregation/size/#example
```

```
// $project sert de pattern pour définir ce qui sera affiché, $size pour compter
```

```
// On définit un nouveau champ 'numberOfBadges' que nous testerons à l'aide de $match
```

```
db.trainers.aggregate([
  {
    $project: {
      name: 1,
      birthDate: 1,
      badges: 1,
      numberOfBadges: {
```

```

    $cond: {
      if: { $isArray: "$badges" },
      then: { $size: "$badges" },
      else: "NA"
    }
  },
  nbPokemons: 1
}
},
{
  $match: {
    "numberOfBadges": {
      $gte: 3
    }
  }
}
]).pretty()

```

// Note : une autre solution, beaucoup plus simple, à l'aide de \$expr

// Fonctionne si l'ensemble des badges contiennent un tableau

```

db.trainers.find( {
  $expr: {
    $gt: [ { $size: "$badges" }, 1 ]
  }
});

```

```
db.trainers.find( {  
  
  $expr: {  
  
    $cond: {  
  
      if: { $isArray: "$badges" },  
  
      then: { $gt: [ { $size: "$badges" }, 3 ] },  
  
      else: 0  
  
    }  
  
  }  
  
}).pretty()
```

// Récupérer tous les dresseurs qui ont plus de 10 ans

```
db.trainers.aggregate( [  
  
  {  
  
    $project: {  
  
      date: "$birthDate",  
  
      age: {  
  
        $divide: [  
  
          { $subtract: [ new Date(),  
  
            "$birthDate"  
  
          ]  
  
        },  
  
        (365 * 24*60*60*1000)  
  
      ]  
  
    }  
  
  }  
  
]
```

},{match:{"age":{"\$gte:10}}}

1)