

1. I recommend using relational model because the data have specific size of 1 team and data structure won't change frequently.
2. I recommend using MongoDB because I think we work on data that unstructured or semi-structured data that doesn't fit the relational model and require the flexibility of a dynamic schema or want more choice over the data model.
3. I recommend using MongoDB because for what question give, they didn't specify structure, so we require the flexibility of a dynamic schema or want more choice over the data model.

#### 4. Gaming

```
Game
{
  team: {
    team1: {
      name: string,
      member: {
        member1_name: string,
        member2_name: string,
        .....
      },
      score: int
    },
    team2: {
      name: string,
      member: {
        member1_name: string,
        member2_name: string,
        .....
      },
      score: int
    },
    .....
  },
  map: string,
  mode: string
}
```

```

Player
{
    Id: int,
    level: int
    name: string,
    clan: string,
    k/da: float,
    money: int,
}

```

## 5. Create MongoDB database with following information

```

> db.ExamScore.insertMany([{"name":"Ramesh","subject":"maths","marks":87}, {"name":"Ramesh","subject":"english","marks":59}, {"name":"Ramesh","subject":"science","marks":77}, {"name":"Rav","subject":"maths","marks":62}, {"name":"Rav","subject":"english","marks":78}, {"name":"Rav","subject":"science","marks":91}, {"name":"Alison","subject":"science","marks":86}, {"name":"Steve","subject":"maths","marks":81}, {"name":"Steve","subject":"english","marks":89}, {"name":"Steve","subject":"science","marks":77}, {"name":"Jan","subject":"english","marks":0,"reason":"absent"}])
{
  "acknowledged": true,
  "insertedIds": [
    "623b731459215b429645c498",
    "623b731459215b429645c499",
    "623b731459215b429645c49a",
    "623b731459215b429645c49b",
    "623b731459215b429645c49c",
    "623b731459215b429645c49d",
    "623b731459215b429645c49e",
    "623b731459215b429645c49f",
    "623b731459215b429645c4a0",
    "623b731459215b429645c4a1",
    "623b731459215b429645c4a2",
    "623b731459215b429645c4a3",
    "623b731459215b429645c4a4" ]
}

```

Find the total marks for each student across all subjects.

```

> db.ExamScore.aggregate([{$group: {_id: "$name", Total: {$sum: "$marks"}}}])
< { _id: 'Rav', Total: 216 }
  { _id: 'Alison', Total: 252 }
  { _id: 'Ramesh', Total: 223 }
  { _id: 'Jan', Total: 0 }
  { _id: 'Steve', Total: 247 }

```

Find the maximum marks scored in each subject.

```

> db.ExamScore.aggregate([{$group: {_id: "$subject", Max: {$max: "$marks"}}}])
< { _id: 'maths', Max: 87 }
  { _id: 'english', Max: 89 }
  { _id: 'science', Max: 86 }

```

Find the minimum marks scored by each student.

```
> db.ExamScore.aggregate([{$group: {_id: "$name", Min: {$min: "$marks"}}}])
< { _id: 'Ramesh', Min: 59 }
  { _id: 'Jan', Min: 0 }
  { _id: 'Rav', Min: 62 }
  { _id: 'Alison', Min: 82 }
  { _id: 'Steve', Min: 77 }
```

Find the top two subjects based on average marks.

```
> db.ExamScore.aggregate([{$group: {_id: "$subject", Average: {$avg: "$marks"}}}, {$sort: {Average: -1}}, {$limit: 2}])
< { _id: 'maths', Average: 78.5 }
  { _id: 'science', Average: 77.75 }
```