TypeScript OOP

- In real world application development, we usually follow various programming systems.
  - POPS [Process Oriented Programming System]
  - OBPS [Object Based Programming System]
  - OOPS [Object Oriented Programming System]
- **POPS**
  - It supports low level features.
  - It can directly interact with hardware services.
  - It uses less memory.
  - It is faster in communication
  - **Code reusability issue.**
  - **Code separation issue.**
  - **No Dynamic memory allocations**
  - **Extensibility issues**

  Ex: C, COBOL, Pascal etc.
- **OBPS**
  - It supports code reusability
  - It supports code separation

- It allows dynamic memory allocation.
- **Extensibility Issue.**
- **No dynamic polymorphism.**
- **Code Security issue.**

Ex: JavaScript, Visual Basic etc.

- **OOPS**
  - It supports code reusability
  - It supports code separation
  - It supports code extensibility
  - Supports dynamic memory allocation.
  - Code security
  - **Complex in configurations**
  - **Uses more memory**
  - **It is tedious [**too long, slow, or dull; tiresome or monotonous**]**

Evolution of OOP

- "Alan Kay" introduced **Object** [ALGOL]**.**
- "Johan Olay, Kristian Nygaard" introduced OOP [code reusability] with **SIMULA 67** early 1967**.**

- “Trygve” introduced code separation into OOP with a framework known as “MVC” in early 1970. Formulated with “**Small Talk”.**
- **1975** C++ made OOP popular among developer.
- **1990** Java used OOP.
- **2003** Microsoft OOP languages like C#, VB.NET etc.

Characteristics of OOP

- Object
- Class
- Inheritance
- Polymorphism
- Abstraction
- Encapsulation
- Contracts
- Templates