



# WEB TECHNOLOGIES: CHATTING APPLICATION

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# WEB FRAMEWORKS

- Nodejs is used as the backend module
- Node.js is based around an event model, not a request/response model,so it is perfect for websockets.
- Server used- Express
- Frontend code - javascript,CSS,HTML



# WEB FRAMEWORKS

**Socket.IO** is a JavaScript WebSocket library for real-time web applications such as:

- Instant messengers
- Push Notifications
- Online Gaming
- **Functions include:**
  - **emit()**
  - **on()**
  - The main idea behind **Socket.IO** is the ability to send and receive any events with any data



# DATABASE

Mongodb is used as database

- cross-platform
- document-oriented
- Classified as a NoSQL database program
- Better for large and unstructured data



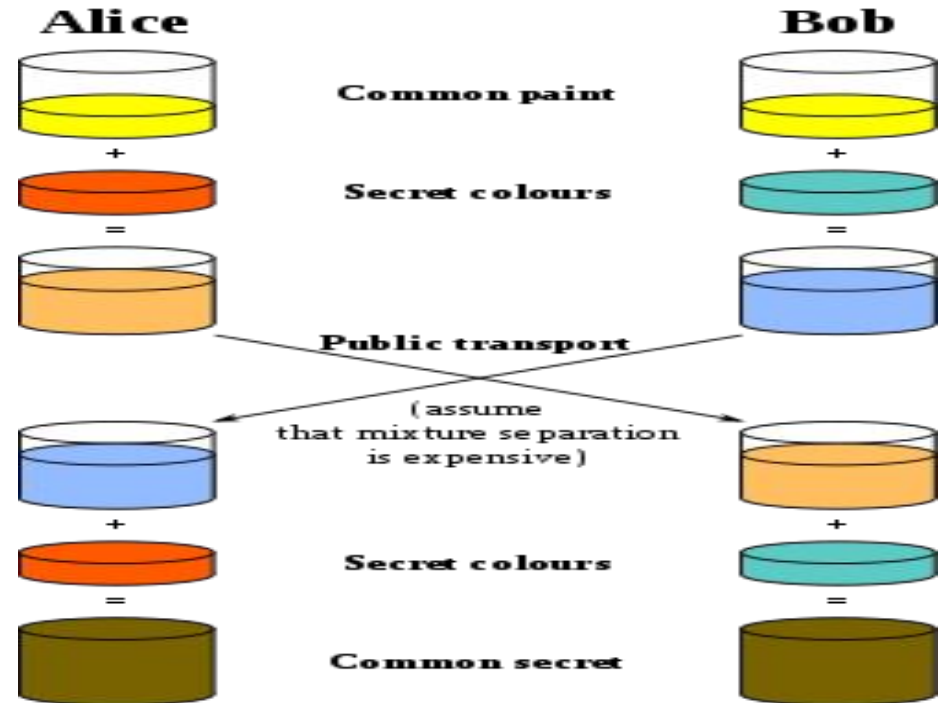
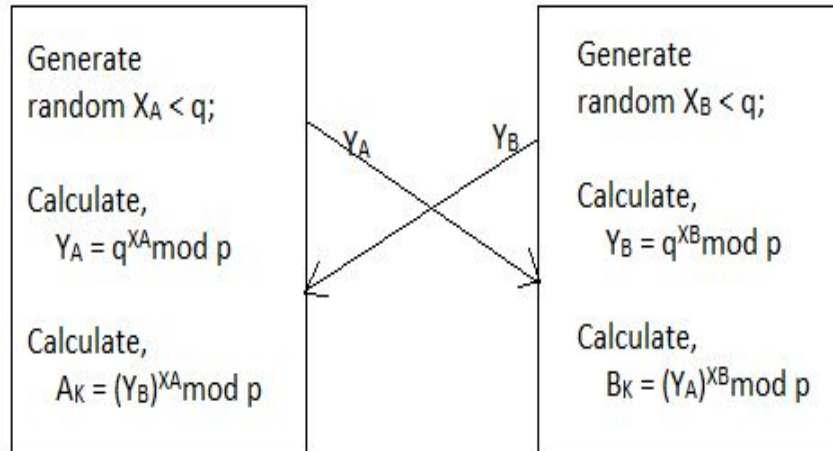
# INTELLIGENT COMPONENT

A classic real time chatting application requires security and accuracy when the users are exchanging messages.

So to enhance safety we have decided to use Diffie-Hellman key exchange and XOR message encryption.

# Diffie-Hellman key exchange

Diffie-Hellman key exchange is a method of securely exchanging cryptographic keys over a public channel and was one of the first public-key protocols





# XOR Encryption

XOR Encryption is an encryption method used to encrypt data and is hard to crack by brute-force method, i.e generating random encryption keys to match with the correct one.



# AJAX TECHNIQUE

## Submission Throttling

- solves the issue of when to send user data to the server.
- buffer the data to be sent to the server on the client and then send the data at predetermined times.





# ARCHITECTURE

- **Service-oriented architecture (SOA)** is a style of **software** design where services are provided to the other components by application components, through a communication protocol over a network.
- The basic principles are:
  - independent of vendors
  - independent of products
  - independent of technologies



THANK YOU