

# Build a Trivia Game using WebSockets with TypeScript

## Build the Server Code

First, we will need to create some types but what will they be?

- **IGame** - this is the main interface where other types will branch from

```
...  
export interface IGame {  
  id: string;  
  currentQuestionId: string;  
  done?: boolean;  
  hasStarted: boolean;  
  timer: number;  
  clients: IClient[];  
  questions: IQuestion[];  
  settings: ISettings;  
}
```

...

- **id** - a distinct identifier to represent each game
- **currentQuestionId** - keeps track of the current question
- **done** - boolean value to know if the game is finished
- **hasStarted** - boolean value to know if the game has started
- **timer** - how long a person has to answer each question
- **clients** - the person playing the game w/ other related info
- **questions** - all the questions for the game with other related info
- **settings** - settings related to the game

- **IClient** - each person (computer, phone, etc) at the url of the game

...

```
export interface IClient {  
  id: string;  
  name: string;  
  questionsAnswered?: eQuestionAnswered[];  
  score: number;  
  ws?: WebSocket;  
}
```

...

- **id** - a distinct identifier to represent the client
- **name** - the display name of the client

- **questionsAnswered** - keeps track of all answered questions where
  - \* 1 - answered correctly
  - \* 0 - answered incorrectly
  - \* -1 - not answered
- **score** - the current score
- **ws** - the websocket for each client, which allows us to send data to the correct client

- **IQuestion** - each question

```

...
export interface IQuestion {
  id: string;
  seq: number;
  text: string;
  answers: IAnswer[];
  done: boolean;
  hasFirstCorrectAnswer: boolean;
  clientIdsWhoAnswered: string[];
}

```

...

- **id** - a distinct identifier to represent the question
- **seq** - helps to keep the order of the questions
- **text** - display text
- **answers** - answers for each question and related info
- **done** - boolean value to know if the question is done
- **hasFirstCorrectAnswer** - boolean value to know if the question has been answered correctly at least once
- **clientIdsWhoAnswered** - list of clients who answered the question