

# **TAG**

## User Manual

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## Abstract

This guide explains how a user can use the system, starting from building the application.

## 1 What is Tag?

Tag (also called it, tig, tiggy, tips, tick, chasey or touch and go) is a playground game involving two or more players' chasing other players in an attempt to "tag" and mark them out of play, usually by touching with a hand. There are many variations; most forms have no teams, scores, or equipment. Usually when a person is tagged, the tagger says, "Tag, you're 'it'!". The last one tagged during tag is "it" for the next round.

## 2 System Description

The system runs on multiple platforms: Android, ios, osx and browser.

### 2.1 Start server

```
node index.js
```

### 2.2 Android

```
android-sdk/emulator/emulator @eumulator&  
cordova run android
```

### 2.3 ios

```
cordova run ios
```

### 2.4 osx

```
cordova run osx
```

### 2.5 Browser

```
cordova run browser --live-reload
```

```
(base) The-Terminal:tag_server gregorymin$ node index.js
192.168.10.24
listening on *:3000
Generated a power up 0
Generated a power up 0
```

Figure 1: Server started.

```
30 //const socket = io('http://10.0.2.2:3000');
31 //const socket = io('http://localhost:3000');
32 const socket = io('http://192.168.10.24:3000');
```

Figure 2: Socket address.

### 3 Using Tag

User may need to change the IP address of local host. Once the server is started, the IP address of the server will display on the screen as it shows in Figure 1. Open [/www/js/index.js](#) (see figure 2) and change the IP address to the current local host IP address, also add this IP address to [/www/index.html](#) Content-Security-Policy.

#### 3.1 Login

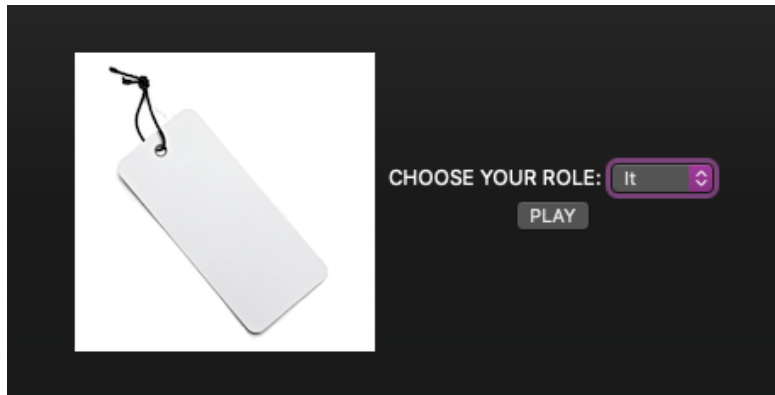


Figure 3: Login panel.

Figure 3 shows the login panel of Tag game. The drop down menu allows the user to select the role in the game (it! or not it!). Once the role is decided, the user can click play button to enter the game.



Figure 4: Game.

### 3.2 Game

Figure 4 shows the browser version of the game canvas. All the details will be explained in section 4.

## 4 Rules

### 4.1 Map

The gaming space is a  $1000 \times 1000$  square map, boundaries are marked as white lines. All players' movement will be constraint within the map boundary, all power ups will randomly generate within a sub-square (coordinates:  $[(200, 200) (200, 800) (800, 200) (800, 800)]$ ) inside the map. The map will be rendered with  $80 \times 80$  grids for reference when players are moving.

### 4.2 Players

There are two roles in this game: it! and not it!. it! will have an avatar 'Joker' while not it! will have an avatar 'Batman'. All players can move freely within the map's boundary. Both two roles have the same speed of 200/s. it! needs to catch players who are not it!, once a not it! is caught by it!, that player becomes it!.

### 4.3 Power ups

There are two types of power up which will be randomly generated on the map with a 15 seconds interval. Each power up lasts for 5 seconds on player who activates it. A newly activated power up will replace a pre-existing power up if

there is one, and the remaining time of the power up will be refreshed (i.e. 5 seconds).

#### **4.3.1 Power up a (red)**

it! with power a will become invisible to other players, other player can no longer see this player on the map. Once the duration of the power up is ended, the player will show on the map again to others.

not it! with power a will possess a super power: kick it! player out of the game (yes, that's right, out of the game) when they touch a it! player when this power is activated.

#### **4.3.2 Power up b (blue)**

it! with power b will increase their size (twice player radius), which means larger collision area.

not it! with power b will increase their speed by a factor of 1.5.