Install Chrome

You need Chrome or Chromium running on a desktop.

On Ubuntu:

```
apt install chromium-browser
```

You need Chrome running on an Android.

- Either install Chrome from APK Mirror;
- or install Chrome from the Play Store, which requires a Google account.

Option #1: Glitch

You can use Glitch to code a mobile game, without installing anything.

Open our you-win template, remix it, and start coding immediately!

Option #2: Node.js

If you prefer, you can install you-win to your computer.

1 Install Node.js, which includes NPM.

On Ubuntu, run the following in a Terminal:

```
curl -sL https://deb.nodesource.com/setup_8.x | sudo -E bash -
sudo apt-get install -y nodejs
sudo apt-get install -y build-essential
```

2 Install you-win globally.

Run the following in your shell (**Command Prompt** on Windows, **Terminal** on macOS/Linux):

```
npm install -g you-win
```

3 Start a new project!

In your shell, use the cd command to move into your Documents folder.

```
cd Documents
```

Run the you—win command to make a new project:

```
you-win first.js
```

This will create a new game from the you-win template, which should save you a bit of typing.

Now open the first.js file you just created in your favourite text editor. Text editors include **Gedit** (Ubuntu only), **VSCode**, **Brackets**, or **Sublime Text**.

The template should look like this:

```
import UW from 'you-win'
import {forever, Phone, World, Sprite, Text, Polygon, Rect, Sound}
from 'you-win'

// var phone = new Phone

UW.init({
})
.then(() => {

   var world = new World
   world.title = ''
   world.background = 'white'

   // ...
})
```

To run your game:

- Open http://localhost:8000 in Chrome on your computer.
- In your Terminal, you should see a web address output to the console, eg http://192.168.1.10:8000/. Open that address on your Android.

Remote Debugging

ADB Driver

First, make sure you have the Android ADB driver installed.

On Ubuntu:

```
apt install android-tools-adb
```

Make sure you're in the plugdev group.

```
sudo usermod -aG plugdev $LOGNAME
```

- On Windows: Install the OEM driver from your manufacturer.
- On macOS: "It just works. Skip this step."

USB Debugging

You need an Android running 4.2 or later (e.g. a Galaxy S3 or newer).

On your Android phone:

- 1 In **Settings**, find **About phone**, and tap **Build number** 7 times. This should enable Developer Options.
- 2 Go back, and open **Developer Options**. Enable **USB Debugging**.
- 3 Use a micro USB cable to connect your Android to your computer. Make sure to **Allow USB Debugging** on your phone.

On your desktop:

- 1 In Chrome, open DevTools (Ctrl+Shift+J; or \times \mathbb{H}J on Mac). Go to More Tools → Remote devices. Make sure Discover USB Devices is ticked.
- 2 Find the you-win tab running on your phone, and click Inspect.

Now you can see a preview of your phone on the computer-but more importantly, you can see any error messages which appear!

Read Google's Remote Debugging article for more details.