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## 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.

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## 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!

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## 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 * as 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.
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## 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  $\text{⌘}+J$  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.