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Instaprint receipt printing

OVERVIEW

A small Android bridge that removes repeat confirmation steps from receipt printing.

ROLE	Android developer
PERIOD	August 30-September 1, 2023
STATUS	Delivered

THE PROBLEM

Printing a receipt from a POS web application required repeated browser confirmations and extra printing applications.

SEND A RECEIPT FROM A WEB POS TO A THERMAL PRINTER

1. The POS print action opens Instaprint through an Android scheme URI.
2. Instaprint sends the receipt to the thermal printer using ESC/POS.
3. The app exits after printing; staff can also open it for manual printing.

WORK DELIVERED

- Connected POS print buttons to an Android scheme URI.
- Built an application that receives the request and sends it to a thermal printer.
- Added optional manual printing through a simple input screen.

WHAT THE WORK ENABLES

- Printing can start directly from the POS workflow.
- The application exits after printing to reduce extra interaction.
- Staff have a manual printing fallback when needed.

CONSTRAINTS

The bridge was designed for the specific Android and thermal-printer workflow used by the POS, rather than as a universal printing service.

IMPLEMENTATION DETAILS

Built an Android application using an ESC/POS thermal printing library and URI-based integration with the web POS.

TOOLS AND TECHNOLOGIES

Kotlin | Android | Android intents | URI scheme integration | ESC/POS

DETAILED CASE STUDY

I built Instaprint as a small Kotlin Android bridge between a web point-of-sale app and a thermal receipt printer. The POS can launch the app directly for printing, with a manual fallback when needed.

01 / THE PROBLEM

Browser printing added steps at checkout

Printing a receipt from the web POS involved repeated browser confirmation prompts and additional printing applications. Those extra handoffs interrupted the checkout flow.

The requirement was specific: make the Android device respond to a print action from the POS and send that receipt to the connected thermal printer. This was a focused integration, not a replacement POS or a universal print service.

02 / THE APPROACH

Use an Android intent to hand off the receipt

I connected the POS print buttons to an Android scheme URI. Selecting print opens Instaprint, which receives the request and passes the receipt to the printer using an ESC/POS thermal-printing library.

The app screenshots show both the printing state and the minimal manual-print screen.

03 / THE SOLUTION

Automatic printing with a manual fallback

After the POS launches it, Instaprint sends the receipt to the thermal printer and exits when printing is complete. A staff member can also open the app from the device menu and enter text for manual printing.

That keeps the normal path tied to the POS button while retaining the app's optional standalone print path.

04 / WHAT CHANGED

Receipt printing starts from the POS workflow

The delivered Android app removes the need to move through the documented browser confirmations and separate printing apps during the standard POS print path. It also provides a manual fallback.

The app's printing and manual-print screens show the two supported paths; the project write-up documents the URI handoff and ESC/POS integration.

A USEFUL PLACE TO START

What is slowing your business down?

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Tell me about the workflow, the friction, and what a better version would look like.

TO GOD BE THE GLORY!

And we know that all things work together for good to them that love God, to them who are the called according to his purpose.

- Romans 8:28