Run   
sudo iwlist *iface* learn *RP\_label output\_filename*from command line

Capture experiment access point  
MAC addresses from input file

Initialize the output file stream

Initialise a window of   
 10 fingerprint readings

**fingerprint\_count =** 0

Is **fingerprint\_count** <10?

Yes

Add fingerprint   
to window

**fingerprint\_count = fingerprint\_count > + 1**

Print “Learning; ” followed by the reference point label, *RP\_label*, to output file

Print a timestamp to the output file

Print out the signal strength readings associated with each of the 4 access points, for each of the 10 fingerprints

**recognised\_address =** false  
**num\_aps =** 0

Is **num\_aps** < 4?

Yes

Wait for hardware to   
 provide a new event

Is the new event a   
MAC address declaration?

Yes

No

Is the router part   
of the experiment   
(or a stray router that happens to be in range?)

No

Yes

**recognised\_address =** true

Extract the MAC address and assign the window unit router at location **[num\_aps] =** this address

**recognised\_address** = false  
**num\_aps** = **num\_aps** + 1

No

Is the new event a   
signal quality statistic?

Yes No

Is the **recognised\_address**   
variable set to true?

No

Yes

Add the signal strength value   
as the current router’s value   
for this fingerprint

Check what kind of event has been released

Check if event is a   
MAC address declaration

(if yes)

(if not part of experiment, go back to waiting...)

(if part of experiment)

Increment **num\_aps** integer

(go back to waiting...)

(if not , is it a quality event?)

(if no, go back to waiting...)

(if yes – it is a qual event)

(is the recognised\_address var set to true?)

(if no – go back to waiting...)

(if yes it is set )

Add the routers signal strength value as the current routers value for this coordinate\

Neutralise recognised\_address to false

(if not, go back to waiting...)