

Home & Building Automation

Session 4

Content

- Debate
- Project 2 presentation
- Home-automation buses
- Home gateways
- enOcean, Phillips Hue, (zwave)

Project 2: Automate Your Friend's Home

- New team leader
- Floor plans (sorry for the imperial scale)
- I want to know cost and effort
 - all components you need to buy
 - their sources
- Deliverables
 - Shopping list incl. prices
 - Work packages, estimation for execution of these
- 20-30 min presentation
- Kanban: of course!
- Scenario!

Your friend's home: Floor plans (1)



ground floor plan

Taken from: <http://www.houseplans.com/plan/3584-square-feet-4-bedrooms-2-5-bathroom-modern-house-plan-2-garage-37341>

Your friend's home: Floor plans (2)



first floor plan

Taken from: <http://www.houseplans.com/plan/3584-square-feet-4-bedrooms-2-5-bathroom-modern-house-plan-2-garage-37341>

Additional Information

Plan Description

- GROUND FLOOR:

- Study 3.5m x 4m or 11' 6" x 13' 2"
- Living Room: 5.4m x 4.8m or 17' 8 1/2" x 15' 9"
- Dining Area: 4.7m x 3.4m or 15' 5" x 11' 2"
- Family Area: 5.3m x 6.6m or 17' 4 1/2" x 21' 8"
- Garage: 6m x 6m or 19' 8" x 19' 8"

- FIRST FLOOR:

- Bedroom1 3.7m x 6m or 12' 1 1/2" x 19' 8"
- Activity Area 5.2m x 4m or 17' 1/2" x 13' 2"
- Bedroom 2 3.7m x 3.9m or 12' 1 1/2" x 12' 9 1/2"
- Bedroom 3 3.7m x 3.9m or 12' 1 1/2" x 12' 9 1/2"
- Bedroom 4 3.7m x 3.9m or 12' 1 1/2" x 12' 9 1/2"

Additional Information

FULL SPECS & FEATURES

Basic Features

Stories : 2
Baths : 2.5

Garage Stalls : 2
Bedrooms : 4

+ 3000 sqm garden
with pool
(don't forget outside Lighting)

Dimension

Depth : 42'
Width : 85'

Height : 24'

Area

Garage Sq Ft : 433 sq ft
Total Sq Ft : 3584 sq ft *

Upper Floor Sq Ft : 1722 sq ft
Main Floor Sq Ft : 1862 sq ft

**Total Square Footage only includes conditioned space and does not include garages, porches, bonus rooms, or decks.*

Bedroom Features

Upstairs Bedrooms
Walk In Closet

Upstairs Master Bedrooms

Kitchen Features

Walk In Pantry Cabinet Pantry
Peninsula Eating Bar

Breakfast Nook
Kitchen Island

Additional Room Features

Family Room Keeping Room
Den Office Study Computer

Main Floor Laundry
Great Room Living Room

Garage Features

Front Entry Garage

Lot Characteristics

Suited For Narrow Lot

Outdoor Spaces

Grill Deck Sundeck

Loft Balcony

Additional Information

- Check
 - phillips hue
 - alexa, siri, google
 - homematic
 - loxone
 - sonoff (itead.cc)
 - knx/gira

Bus&Protocol Research

- Zigbee 12/ Zwave 3
- X10 1/ Onewire 1
- rs-232 0/ rs-422/485/dmx 0
- KNX-bus 4/ Ebus 2
- SPI 5/ I2C 4
- Canbus 1/ Modbus 4
- Bacnet
- select, study, in groups of 2 (45min)
- speed, throughput, latency, length, felxibility, importance, usage example, domain
- present 10-15min each group

Home Gateways

- Integrate all devices with home-assistant and openhab
- Add and integrate more stuff (4 or more things):
 - Display
 - Temperature
 - Motion Sensor/other sensors (take a look)
 - Led-strips
 - Time/Weather/Presence dependency
 - Find solution to add Philips Hue (ethernet-bridge!)