11/9/16 Assembly

Class Notes

FPU

* Floating point unit
* When using printf,
  + Odd things can happen
* To fix,
  + Manipulate frame pointer

Goofy aspects of printf

* Printf in assembly:
  + %f must be a 64bit float
  + If 1st format specifier,
    - It must be in registers r2 & r3
      * R2 holds lower 32 bits
      * R3 holds higher 32 bits
    - Least significant word goes first

Vectors

* Vldr = load to vector.
* Vcut
  + Vector cut

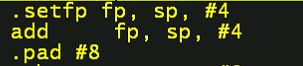
Conversion

* .F64
  + – 64bit float
* .F32
  + - 32bit float
* D0 – d15
  + 64 bit float (double) registries
* S0 - s31
  + 32 bit float registries
* Vcvt.f64, f32 <destination>, <regular>
  + Vector convert from 64 to 32

Vmov destroyR1, destroy R2

* Source\_64 bit registries

Frame pointer (fp)

* Push {fp, lr}
  + Same code:
  + 
  + Delegates 8 bytes for the 64bit floating point requirement on fp
  + 

Fcvtds

* Floating point convert to double

If you have more than one format specifier

* All other %f values are pushed onto stack as 64 bit values

When passing other values, subtract from sp to create room for args

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