

What are the goals of instruction set architecture (ISA) design?

ISAs are essential to supporting which model of computation?

What is the format of an ARM instruction?

What are the four underlying principles of hardware design?

What is a word?

Why not have a larger number of registers?

How do computers get around the small number of registers?

How is ARM addressing different from other architectures?



Describe endianness in terms of addressability.

What is spilling?

Why is it more desirable for a program variable to be in a register than in memory?

What is an intermediate operand?

Base register + offset addressing in instructions are useful in working with ...

What are the limitations of the simple sign and magnitude representation?

Why is hexadecimal popular?

What is the consequence of having multiple instruction formats?

How can this be mitigated?



What is a common use of bit-wise and bit-shifting operations?

What functionalities in C are similar?

What is a bit mask?

How is bit shifting unique in ARM?

What is a basic block?

How are they used?

How do compare instructions communicate their results to conditional branches?

What is the advantage of treating signed integers as unsigned in two's complement?

What is the program counter?

What strategies does ARM use to increase the jump distance?



What is unusual in ARM's conditional instructions?

Name four common addressing modes.