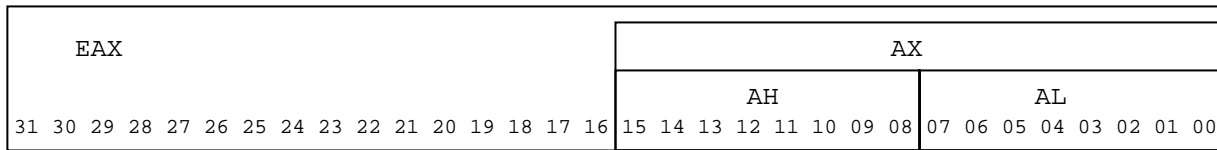


Princeton University

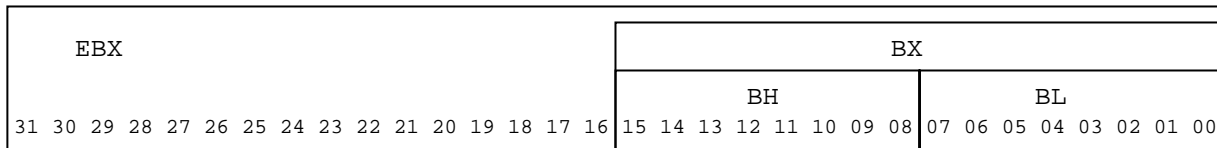
COS 217: Introduction to Programming Systems

IA-32 Registers

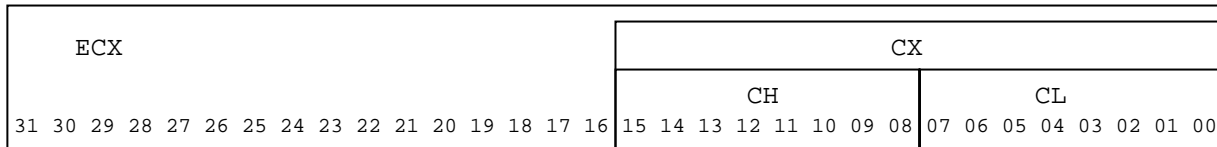
General Purpose Registers



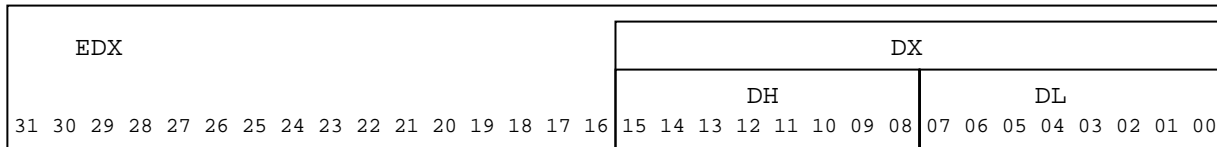
Accumulator for operands and results data. Stores function return values.



Accumulator for operands and results data. Pointer to data in the DS segment. A function that alters EBX must restore it before returning.



Accumulator for operands and results data. Counter for string and loop operations.



Accumulator for operands and results data. I/O pointer.

General Purpose Registers (String Related)

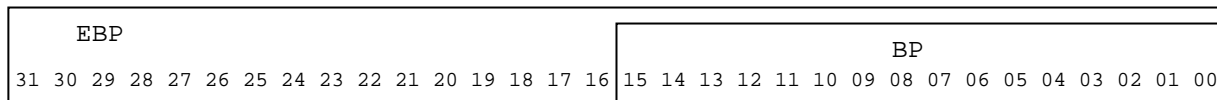


Accumulator for operands and results data. Pointer to data in the DS segment. Source pointer for string operations. A function that alters ESI must restore it before returning.



Accumulator for operands and results data. Pointer to data in the ES segment. Destination pointer for string operations. A function that alters EDI must restore it before returning.

General Purpose Registers (Stack Related)

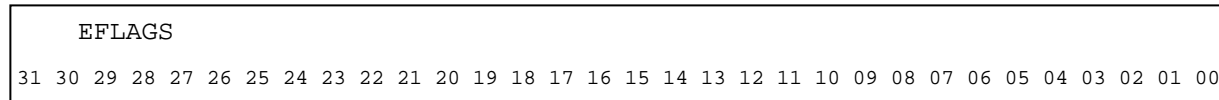


Base Pointer Register. Pointer to bottom of current stack frame (in SS segment).



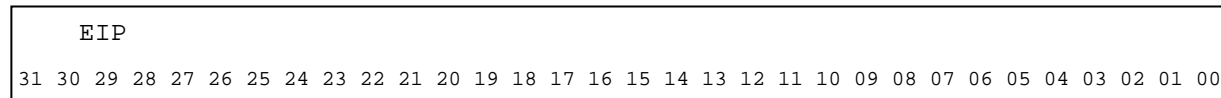
Stack Pointer Register. Pointer to top of current stack frame (in SS segment).

Status and Control Register



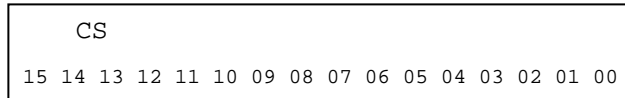
Bits indicating the result of execution of the most recent cmp instruction, and other control and status bits.

Instruction Pointer Register

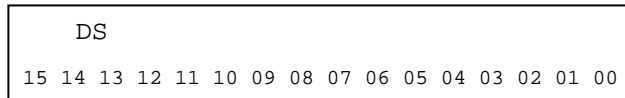


Address of the next instruction to be executed

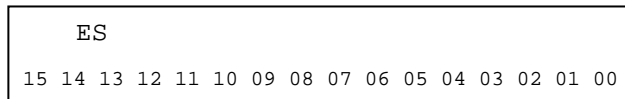
Segment Registers



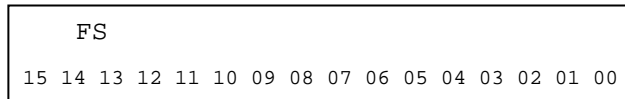
Address of the beginning of the **code** segment/section.



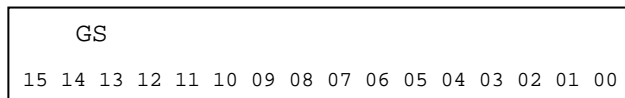
Address of the beginning of a **data** segment/section.



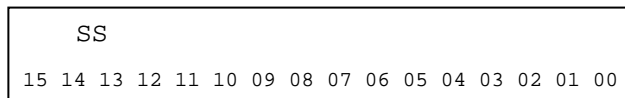
Address of the beginning of a **data** segment/section.



Address of the beginning of the **code** segment/section.



Address of the beginning of the **code** segment/section.



Address of the beginning of the **stack** segment/section.