
Corso di Sicurezza dei Sistemi Informatici

Richiami di Programmazione Assembly x86



Luigi Coppolino, Luigi Romano

Contact info

Prof. Luigi Coppolino

luigi.coppolino@uniparthenope.it

Prof. Luigi Romano

luigi.romano@uniparthenope.it

Università degli Studi di Napoli "Parthenope"
Dipartimento di Ingegneria

www.fitnesslab.eu



The Fault and Intrusion Tolerant NETworked SystemS (FITNESS) Research Group

<http://www.fitnesslab.eu/>

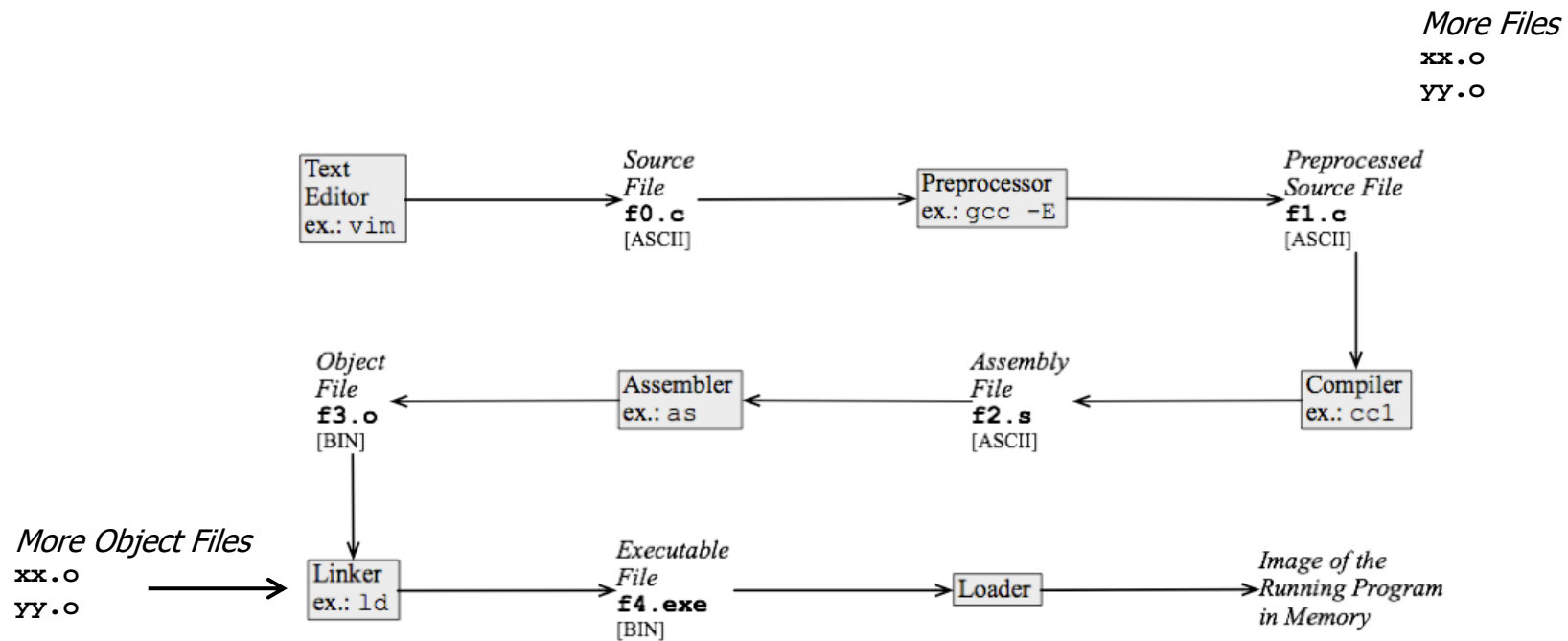


Roadmap

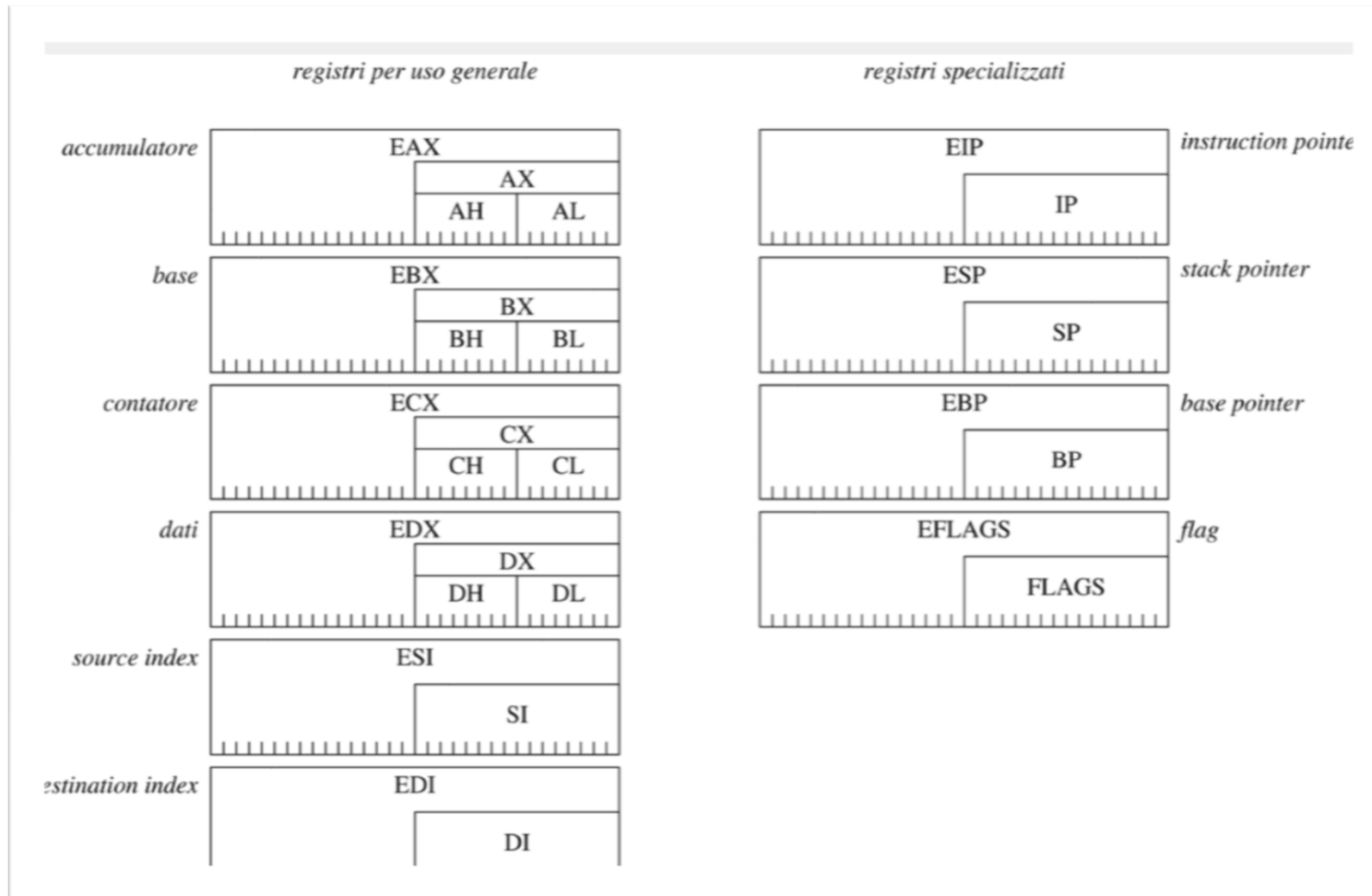


Software Development Process

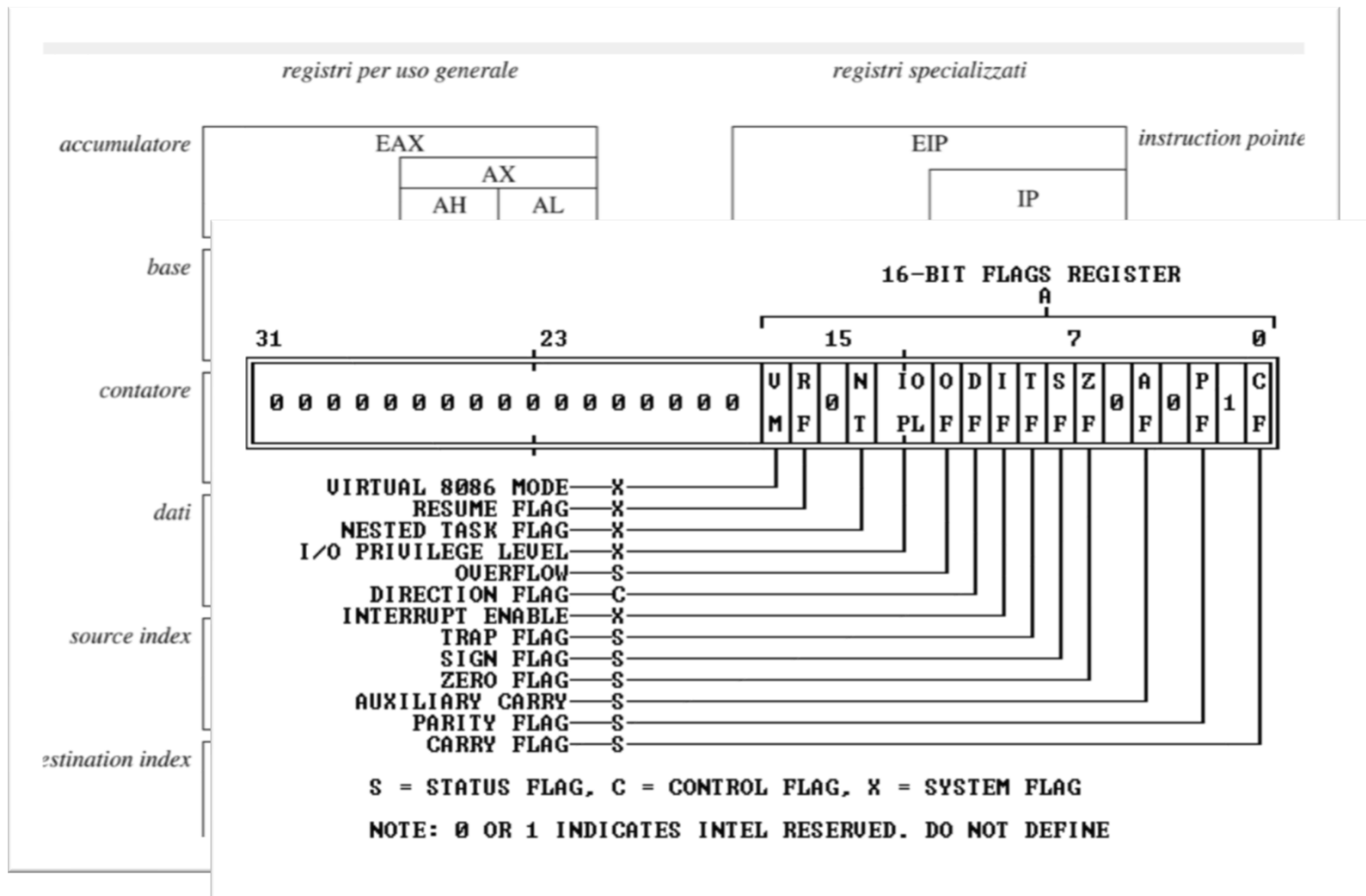
➤ Object



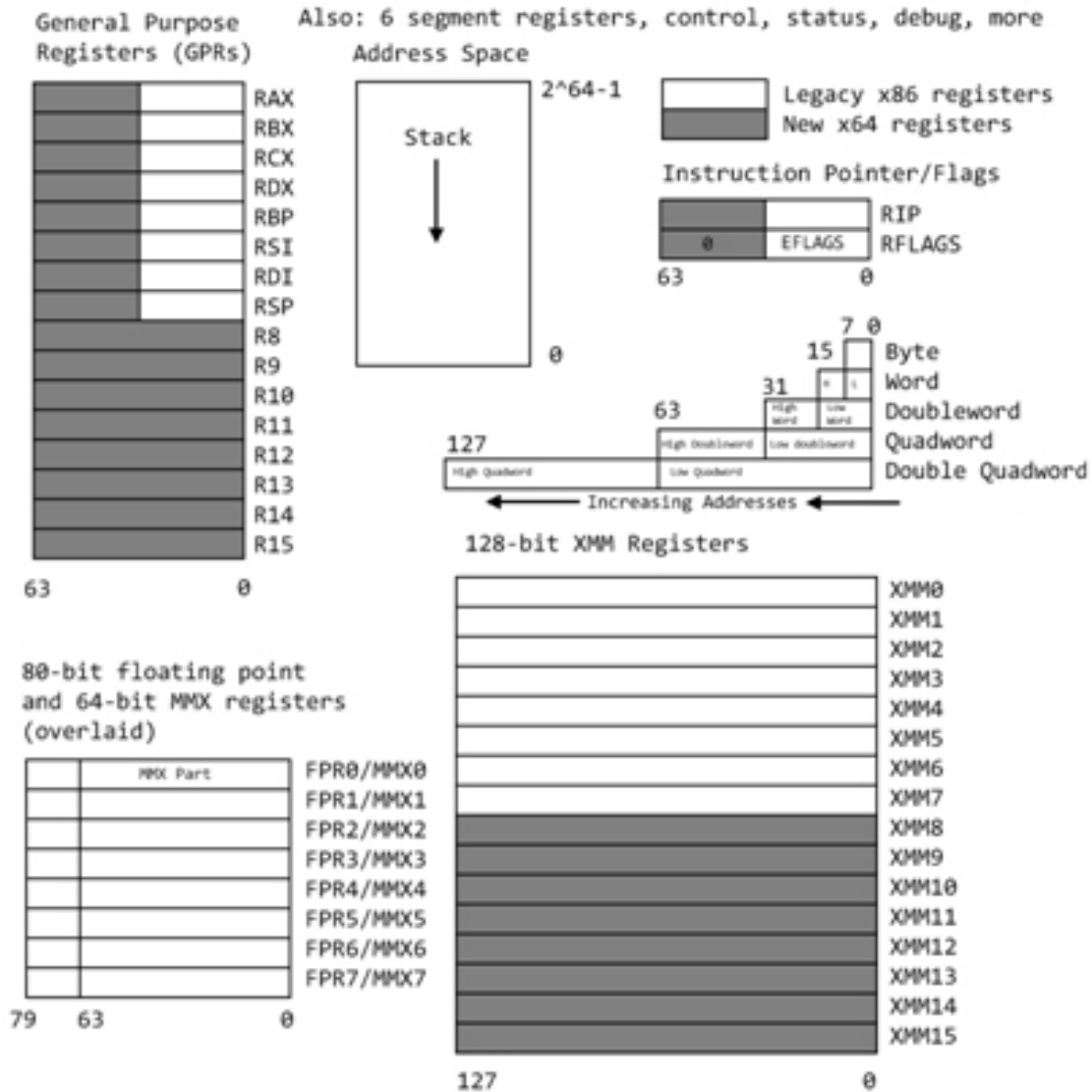
Programming Model: x86 (IA32)



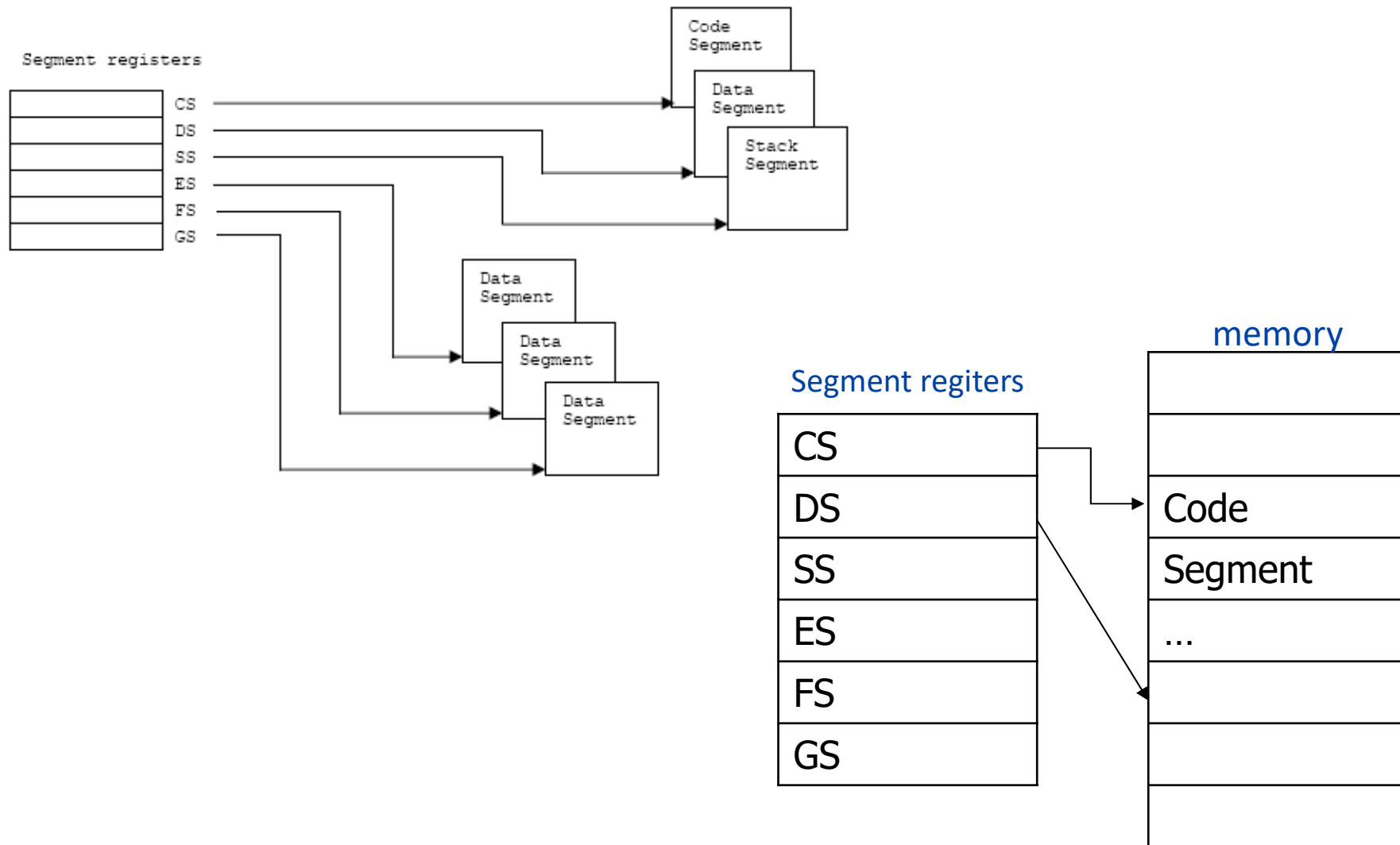
Programming Model: x86 (IA32)



Programming Model: x86 (IA64)

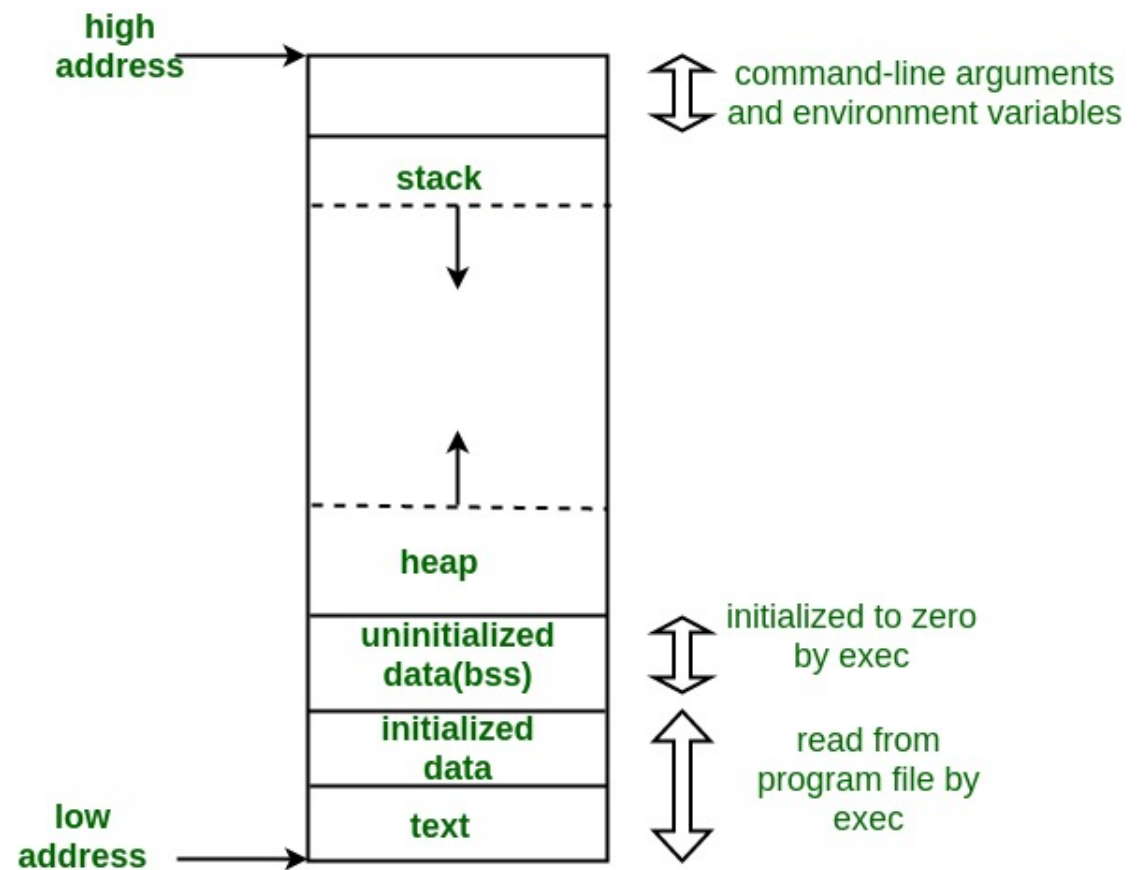


Segment Registers and Flat Memory



C Programs Memory Layout

- HEAP: malloc, calloc, new ...
- STACK: automatic variables
 - push
 - pop



Memory organization and accessibility

Data Type	Size
Byte	8 bits
Word	16 bits
Doubleword	32 bits
Quadword	64 bits

Memory organization

