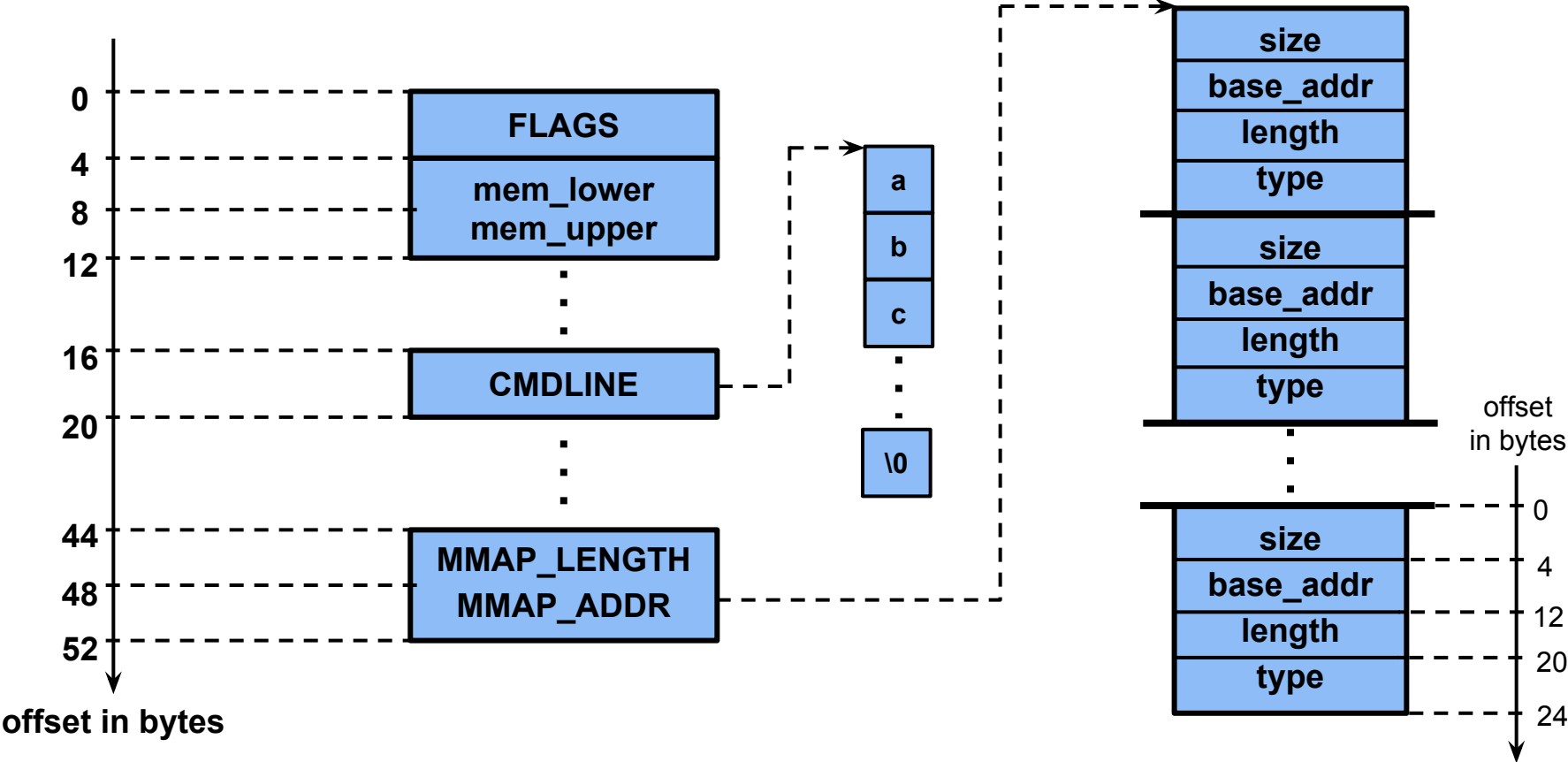


Operating Systems

Practice 6

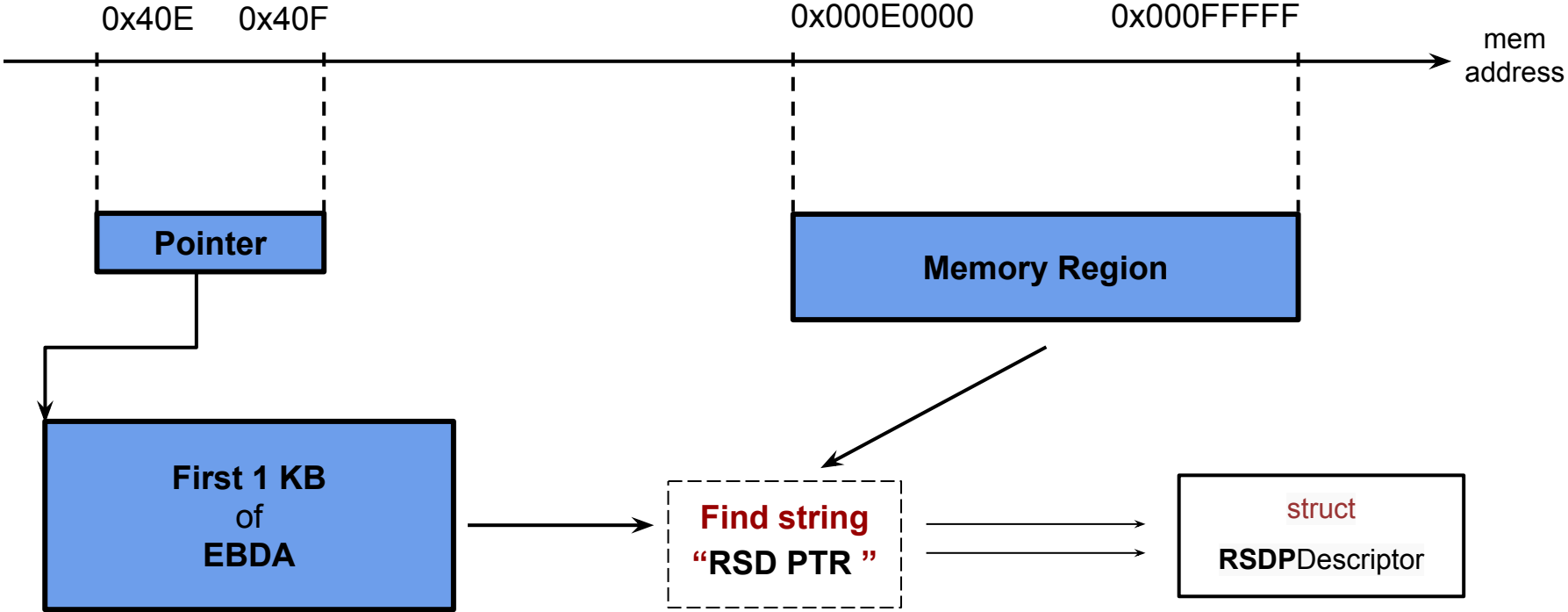
Multiboot Information

Multiboot information structure



Advanced Configuration and Power Interface

Root System Descriptor Pointer



Root System Descriptor Pointer

```
struct RSDPDescriptor {  
    char Signature[8];  
    uint8_t Checksum;  
    char OEMID[6];  
    uint8_t Revision;  
    uint32_t RsdAddress;  
} __attribute__((packed));
```

<http://wiki.osdev.org/RSDP>

Root System Descriptor Table

- Contains **pointers** to all the other **System Description Tables**
- Starts with the standard **ACPI table header**
- You can find following SDT:
 - **"APIC": Multiple APIC Description Table (MADT)**
 - **"CPEP"**: Corrected Platform Error Polling Table (CPEP)
 - **"DSDT"**: Differentiated System Description Table (DSDT)
 - **"ECDT"**: Embedded Controller Boot Resources Table (ECDT)
 - and other ...

<http://wiki.osdev.org/RSDT>

<http://www.acpi.info/>

```
struct RSDT {  
    struct ACPISDTHeader h;  
    uint32_t OtherSDT[entries];  
}
```

$entries = (h.Length - sizeof(h)) / 4$

```
struct ACPISDTHeader {  
    char Signature[4];  
    uint32_t Length;  
    uint8_t Revision;  
    uint8_t Checksum;  
    char OEMID[6];  
    char OEMTableID[8];  
    uint32_t OEMRevision;  
    uint32_t CreatorID;  
    uint32_t CreatorRevision;  
}
```

Multiple APIC Description Table

- Describes all of the interrupt controllers in the system
- Starts with the standard ACPI table header
- Contains entries of following types:
 - **Processor Local APIC**
 - **I/O APIC**
 - **Interrupt Source Override**

<http://wiki.osdev.org/MADT>

<http://www.acpi.info/>

Q&A