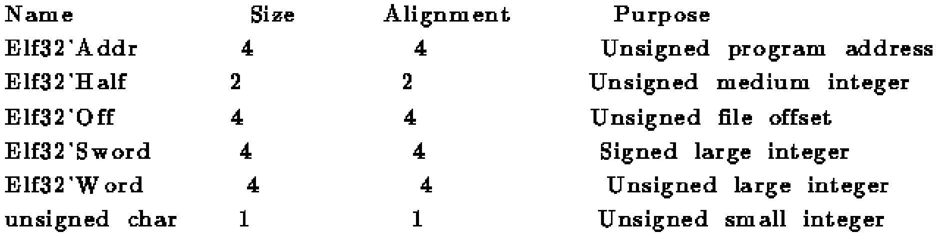
ELF Segments

Segments are a way of grouping related sections. For example, the `text` segment groups executable code, the `data` segment groups the program data, and the `dynamic` segment groups information relevant to dynamic loading. Each segment consists of one or more sections. A process image is created by loading and interpreting segments. The operating system logically copies a file's segment to a virtual memory segment according to the information provided in the program header table. The OS can also use segments to create a shared memory resource. Figure 2.9 summarizes the sections that might be included in a segment.

Figure: Data representation. This figure illustrates the representation of ELF data. These data descriptions are machine independent so that a data type that is designated as an Elf32_Half will be the same size on all machines. An Elf32_Half might be used to represent an unsigned short or an unsigned char on some machines. The association between language data types and ELF data types is made in the file <sys/elftypes.h>.



Name	Size	Alignment	Purpose
Elf32‘Addr	4	4	Unsigned program address
Elf32‘Half	2	2	Unsigned medium integer
Elf32‘Off	4	4	Unsigned file offset
Elf32‘Sword	4	4	Signed large integer
Elf32‘Word	4	4	Unsigned large integer
unsigned char	1	1	Unsigned small integer