ELF format

Format

Linking View

ELF Header						
Program Header Table optional						
Section 1						
Section n						
Section Header Table						

Execution View

ELF Header					
Program Header Table					
Segment 1					
Segment 2					
Section Header Table optional					

Zaglavlje

```
#define EI_NIDENT
                      16
typedef struct {
         unsigned char e ident[EI NIDENT];
         Elf32 Half e type;
         Elf32 Half e machine;
         Elf32 Word e version;
         Elf32 Addr e entry;
         Elf32 Off
                    e phoff;
         Elf32 Off e shoff;
         Elf32 Word e flags;
         Elf32 Half e ehsize;
         Elf32 Half e phentsize;
         Elf32 Half e phnum;
         Elf32 Half e shentsize;
         Elf32 Half e shnum;
         Elf32 Half e shstrndx;
 } Elf32 Ehdr;
```

e_ident[]

Na	ame	Value		Purpose
EI_MAG0		0	File id	dentification
EI_MAG1		1	File id	dentification
EI_MAG2		2	File id	dentification
EI_MAG3		3	File id	dentification
EI_CLASS		4	File c	lass
EI_DATA -		5	Data	encoding
EI_VERSION		6	File v	ersion
EI_PAD		7	Start	of padding byte:
EI NIDENT	\	16	Size	ofe ident[]

e_ident

Name	Value	Meaning
ELFMAG0	0x7f	e_ident[EI_MAG0]
ELFMAG1	'E'	e_ident[EI_MAG1]
ELFMAG2	'L'	e_ident[EI_MAG2]
ELFMAG3	'F'	e_ident[EI_MAG3]

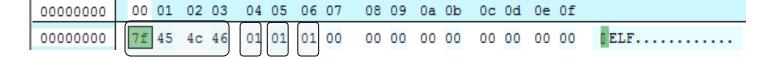
za 32-bitni sistem

Name	Value	Meaning
ELFCLASSNONE	0	Invalid class
ELFCLASS32	1	32-bit objects
ELFCLASS64	2	64-bit objects

litle-endian

Name	Value	Meaning
ELFDATANONE	0	Invalid data encoding
ELFDATA2LSB	1	See below
ELFDATA2MSB	2	See below

Verzija zaglavlja: 1



```
e ident[EI N
unsigned char
Elf32 Half
              e type;
Elf32 Half
               e machine;
Elf32 Word
               e version;
Elf32 Addr
               e entry;
Elf32 Off
               e phoff;
               e shoff;
Elf32 Off
Elf32 Word
               e flags;
Elf32 Half
               e ehsize;
Elf32 Half
               e phentsize;
Elf32 Half
               e phnum;
Elf32 Half
               e shentsize;
Elf32 Half
               e shnum;
Elf32 Half
               e shstrndx;
```

Name	Value	Meaning
ET_NONE	0	No file type
ET_REL	1	Relocatable file
ET_EXEC	2	Executable file
ET_DYN	3	Shared object file
ET_CORE	4	Core file
ET_LOPROC	0xff00	Processor-specific
ET_HIPROC	0xffff	Processor-specific

00000000	00 01	02 03	04 05	06 07	08 09	0a 0b	0c 0d	0e 0f
00000010	01 00	03 00	01 00	00 00	00 00	00 00	00 00	00 00
00000020	d0 00	00 00	00 00	00 00	34 00	00 00	00 00	28 00
00000030	09 00	06 00	e8 07	00 00	00 6a	00 e8	fc ff	ff ff

unsigned char	e_ident[EI_N
Elf32_Half	e type;
Elf32_Half	e_machine;
Elf32_Word	e_version;
Elf32_Addr	e_entry;
Elf32_Off	e_phoff;
Elf32_Off	e_shoff;
Elf32_Word	e_flags;
Elf32_Half	e_ehsize;
Elf32_Half	e_phentsize;
Elf32_Half	e_phnum;
Elf32_Half	e_shentsize;
Elf32_Half	e_shnum;
Elf32 Half	e shstrndx;

Name	Value	Meaning
ET_NONE	0	No machine
EM_M32	1	AT&T WE 32100
EM_SPARC	2	SPARC
EM_386	3	Intel Architecture
EM_68K	4	Motorola 68000
EM_88K	5	Motorola 88000
EM_860	7	Intel 80860
EM_MIPS	8	MIPS RS3000 Big-Endian
EM_MIPS_RS4_BE	10	MIPS RS4000 Big-Endian
RESERVED	11-16	Reserved for future use

00000000	00 01	02 03	04 05	06 07	08 09	0a 0b	0c 0d	0e 0f
00000010	01 00	03 00	01 00	00 00	00 00	00 00	00 00	00 00
00000020	d0 00	00 00	00 00	00 00	34 00	00 00	00 00	28 00
00000030	09 00	06 00	e8 07	00 00	00 6a	00 e8	fc ff	ff ff

```
unsigned char
               e ident[EI N
Elf32 Half
               e type;
Elf32 Half
               e machine;
Elf32 Word
               e version;
Elf32 Addr
               e entry;
Elf32 Off
               e phoff;
               e shoff;
Elf32 Off
Elf32 Word
               e flags;
Elf32 Half
               e ehsize;
Elf32 Half
               e phentsize;
Elf32 Half
               e phnum;
Elf32 Half
               e shentsize;
Elf32 Half
               e shnum;
Elf32 Half
               e shstrndx;
```

e version

Name	Value	Meaning
EV_NONE	0	Invalid versionn
EV_CURRENT	1	Current version

00000000	00 01	02 03	04 05	06 07	08 09	0a 0b	0c 0d	0e 0f
00000010	01 00	03 00	01 00	00 00	00 00	00 00	00 00	00 00
00000020	d0 00	00 00	00 00	00 00	34 00	00 00	00 00	28 00
00000030	09 00	06 00	e8 07	00 00	00 6a	00 e8	fc ff	ff ff

```
unsigned char
               e ident[EI N
Elf32 Half
               e type;
Elf32 Half
               e machine;
Elf32 Word
               e version;
Elf32 Addr
               e entry;
Elf32 Off
               e phoff;
Elf32 Off
               e shoff;
Elf32 Word
               e flags;
Elf32 Half
               e ehsize;
Elf32 Half
               e phentsize;
Elf32 Half
               e phnum;
Elf32 Half
               e shentsize;
Elf32 Half
               e shnum;
Elf32 Half
               e shstrndx;
```

e_entry: virtuelna adresa ulazne tačke programa ili 0

00000000	00 00	L 02	03 04	05	06	07		80	09	0a	0b	0c	0d	0e	0f
00000010	01 00	03	00 01	00	00	00		00	00	00	00	00	00	00	00
00000020	d0 00	00	00 00	00	00	00	`	34	00	00	00	00	00	28	00
00000030	09 00	06	00 e8	07	00	00		00	6a	00	e8	fc	ff	ff	ff

```
unsigned char
               e ident[EI N
Elf32 Half
               e type;
Elf32 Half
               e machine;
Elf32 Word
               e version;
Elf32 Addr
               e entry;
Elf32 Off
               e phoff;
Elf32 Off
               e shoff;
Elf32 Word
               e flags;
Elf32 Half
               e ehsize;
Elf32 Half
               e phentsize;
Elf32 Half
               e phnum;
Elf32 Half
               e shentsize;
Elf32 Half
               e shnum;
Elf32 Half
               e shstrndx;
```

e_phoff: ofset u fajlu (u bajtovima) do zaglavlja programa ili 0

00000000	00	01	02	03	04	05	06	07	80	09	0a	0b	0c	0d	0e	0f
00000010	01	00	03	00	01	00	00	00	00	00	00	00	00	00	00	00
00000020	d0	00	00	00	00	00	00	00	34	00	00	00	00	00	28	00
00000030	09	00	06	00	e8	07	00	00	00	6a	00	e8	fc	ff	ff	ff

```
unsigned char
               e ident[EI N
Elf32 Half
               e type;
Elf32 Half
               e machine;
Elf32 Word
               e version;
Elf32 Addr
               e entry;
Elf32 Off
               e phoff;
Elf32 Off
               e shoff;
Elf32 Word
               e flags;
Elf32 Half
               e ehsize;
Elf32 Half
               e phentsize;
Elf32 Half
               e phnum;
Elf32 Half
               e shentsize;
Elf32 Half
               e shnum;
Elf32 Half
               e shstrndx;
```

e_shoff: ofset u fajlu (u bajtovima) do tabele zaglavlja sekcija ili 0

00000000	00 01	02 03	04 05	06 07	08 09	0a 0b	0c 0d	0e 0f
00000010								
00000020	d0 00	00 00	00 00	00 00	34 00	00 00	00 00	28 00
00000030	09 00	06 00	e8 07	00 00	00 6a	00 e8	fc ff	ff ff

```
unsigned char
               e ident[EI N
Elf32 Half
               e type;
Elf32 Half
               e machine;
Elf32 Word
                e version;
                                   e_flags: flegovi specifični
Elf32 Addr
                e entry;
Elf32 Off
                e phoff;
                                   za konkretan procesor
                e shoff:
Elf32 Off
Elf32 Word
               e flags;
Elf32 Half
                e ehsize;
Elf32 Half
                e phentsize;
Elf32 Half
                e phnum;
Elf32 Half
                e shentsize;
Elf32 Half
               e shnum;
Elf32 Half
                e shstrndx;
```

00000000	00 01	02 03	04 05	06 07	08 09	0a 0b	0c 0d	0e 0f
00000010	01 00	03 00	01 00	00 00	00 00	00 00	00 00	00 00
00000020	d0 00	00 00	00 00	00 00	34 00	00 00	00 00	28 00
00000030	09 00	06 00	e8 07	00 00	00 6a	00 e8	fc ff	ff ff

```
unsigned char
               e ident[EI N
Elf32 Half
               e type;
Elf32 Half
               e machine;
Elf32 Word
               e version;
                                   e ehsize: veličina ELF
Elf32 Addr
               e entry;
Elf32 Off
               e phoff;
                                   zaglavlja u bajtovima.
Elf32 Off
               e shoff;
Elf32 Word
               e flags;
Elf32 Half
               e ehsize;
Elf32 Half
               e phentsize;
Elf32 Half
               e phnum;
Elf32 Half
               e shentsize;
Elf32 Half
               e shnum;
Elf32 Half
               e shstrndx;
```

00000000	00 01	02 03	04 05	06 07	08 09	0a 0b	0c 0d	0e 0f
00000010	01 00	03 00	01 00	00 00	00 00	00 00	00 00	00 00
00000020	d0 00	00 00	00 00	00 00	34 00	00 00	00 00	28 00
00000030	09 00	06 00	e8 07	00 00	00 6a	00 e8	fc ff	ff ff

```
unsigned char
               e ident[EI N
Elf32 Half
               e type;
Elf32 Half
               e machine;
Elf32 Word
               e version;
Elf32 Addr
               e entry;
Elf32 Off
               e phoff;
Elf32 Off
               e shoff;
Elf32 Word
               e flags;
Elf32 Half
               e ehsize;
Elf32 Half
               e phentsize;
Elf32 Half
               e phnum;
Elf32 Half
               e shentsize;
Elf32 Half
               e shnum;
Elf32 Half
               e shstrndx;
```

e_phentsize: veličina zaglavlja programa (jedan ulaz u tabeli zaglavlja programa).

00000000	00	01	02	03	04	05	06	07	80	09	0a	0b	0c	0d	0e	0f
00000010	01	00	03	00	01	00	00	00	00	00	00	00	00	00	00	00
00000020	d0	00	00	00	00	00	00	00	34	00	00	00	00	00	28	00
00000030	09	00	06	00	e8	07	00	00	00	6a	00	e8	fc	ff	ff	ff

```
unsigned char
               e ident[EI N
Elf32 Half
               e type;
Elf32 Half
               e machine;
Elf32 Word
               e version;
Elf32 Addr
               e entry;
Elf32 Off
               e phoff;
Elf32 Off
               e shoff;
Elf32 Word
               e flags;
Elf32 Half
               e ehsize;
               e phentsize;
Elf32 Half
Elf32 Half
               e phnum;
Elf32 Half
               e shentsize;
Elf32 Half
               e shnum;
Elf32 Half
               e shstrndx;
```

e_phnum: broj ulaza u tabeli zaglavlja programa ili 0 ako tabela nije prisutna

00000000	00 01	02 03	04 05	06 07	08 09	0a 0b	0c 0d	0e 0f
00000010	01 00	03 00	01 00	00 00	00 00	00 00	00 00	00 00
00000020	d0 00	00 00	00 00	00 00	34 00	00 00	00 00	28 00
00000030	09 00	06 00	e8 07	00 00	00 6a	00 e8	fc ff	ff ff

```
unsigned char
               e ident[EI N
Elf32 Half
               e type;
Elf32 Half
               e machine;
Elf32 Word
               e version;
Elf32 Addr
               e entry;
Elf32 Off
               e phoff;
Elf32 Off
               e shoff;
Elf32 Word
               e flags;
Elf32 Half
               e ehsize;
Elf32 Half
               e phentsize;
Elf32 Half
               e phnum;
Elf32 Half
               e shentsize;
Elf32 Half
               e shnum;
Elf32 Half
               e shstrndx;
```

e_shentsize: veličina zaglavlja sekcije (jedan ulaz u tabeli zaglavlja sekcija)

00000000	00 01	02 03	04 05	06 07	08 09	0a 0b	0c 0d 0e 0f
00000010	01 00	03 00	01 00	00 00	00 00	00 00	00 00 00 00
00000020	d0 00	00 00	00 00	00 00	34 00	00 00	00 00 28 00
00000030	09 00	06 00	e8 07	00 00	00 6a	00 e8	fc ff ff ff

```
unsigned char e ident[EI N
Elf32 Half
               e type;
Elf32 Half
               e machine;
Elf32 Word
               e version;
Elf32 Addr
               e entry;
Elf32 Off
               e phoff;
Elf32 Off
               e shoff;
Elf32 Word
               e flags;
Elf32 Half
               e ehsize;
Elf32 Half
               e phentsize;
Elf32 Half
               e phnum;
Elf32 Half
               e shentsize;
Elf32 Half
               e shnum;
Elf32 Half
               e shstrndx;
```

e_shnum: broj ulaza u tabeli zaglavlja sekcija ili 0 ako tabela nije prisutna

00000000	00 01	02 03	04 05	06 07	08 09	0a 0b	0c 0d	0e 0f
00000010	01 00	03 00	01 00	00 00	00 00	00 00	00 00	00 00
00000020	d0 00	00 00	00 00	00 00	34 00	00 00	00 00	28 00
00000030	09 00	06 00	e8 07	00 00	00 6a	00 e8	fc ff	ff ff

```
unsigned char
               e ident[EI N
Elf32 Half
               e type;
Elf32 Half
               e machine;
Elf32 Word
               e version;
Elf32 Addr
               e entry;
Elf32 Off
               e phoff;
Elf32 Off
               e shoff;
Elf32 Word
               e flags;
Elf32 Half
               e ehsize;
Elf32 Half
               e phentsize;
Elf32 Half
               e phnum;
Elf32 Half
               e shentsize;
Elf32 Half
               e shnum;
Elf32 Half
               e shstrndx;
```

e_shstrndx: indeks ulaza u tabeli sekcija koji odgovara section name string table.

00000000	00 01	02 03	04 05	06 07	08 09	0a 0b	0c 0d	0e 0f
00000010	01 00	03 00	01 00	00 00	00 00	00 00	00 00	00 00
00000020	d0 00	00 00	00 00	00 00	34 00	00 00	00 00	28 00
00000030	09 00	06 00	e8 07	00 00	00 6a	00 e8	fc ff	ff ff

Sekcije

Rezervisani indeksi:

- SHN_UNDEF objekat koji referiše ovu sekciju nije definisan.
- SHN_LORESERVE donja granica rezervisanih indeksa sekcija.
- SHN_LOPROC sekcije rezervisane za potrebe različitih procesora
- SHN HIPROC
- SHN_ABS simbol koji referiše ovaj segment je apsolutni simbol.
- SHN_COMMON sekcija za common simbole (za simbole definisane u C-u koji nisu alocirani).
- SHN_HIRESERVE gornja granica rezervisanih indeksa sekcija.

Name	Value
SHN_UNDEF	0
SHN_LORESERVE	0xff00
SHN_LOPROC	0xff00
SHN_HIPROC	0xff1f
SHN_ABS	0xfff1
SHN_COMMON	0xfff2
SHN_HIRESERVE	0xffff

Specifičnosti sekcija

- Svaka sekcija ima tačno jedno zaglavlje.
- Može postojati zaglavlje bez sekcije.
- Svaka sekcija obuhvata kontinualan niz bajtova.
- Sekcije se ne preklapaju.
- U fajlu može postojati sadržaj koji je van sekcija i njegov format nije specificiran.

Struktura ulaza u tabeli sekcija

```
typedef struct {
         Elf32 Word
                      sh name;
         Elf32 Word
                      sh type;
         Elf32 Word
                      sh flags;
         Elf32 Addr
                      sh addr;
         Elf32 Off
                      sh offset;
         Elf32 Word
                      sh size;
         Elf32 Word
                      sh link;
                      sh info;
         Elf32 Word
         Elf32 Word
                      sh addralign;
                      sh entsize;
         Elf32 Word
} Elf32 Shdr;
```

	00000098	(00	01	02	03	04	05	06	07		80	09	0a	0k)	0с	0d	0e	0f							
	00000098	(69	33	38	36	00	00	00	00		00	2e	73	79)	6d	74	61	62		i38	6		. 3	ymta	ab
	000000a0	(00	2e	73	74	72	74	61	62		00	2e	73	68	}	73	74	72	74		3	trt	ab.	si	hsti	rt
	000000b0	(61	62	00	2e	72	65	6с	2e		74	65	78	74	ŀ	00	2e	64	61		ab.	.re	1.1	ex	t	ia
F	000000c0		74	61	00	2e	62	73	73	00		2e	6e	6f	74	ŀ	65	00	00	00		ta.	.bs	s	no	te	
_	lf32 Word		Q	h t	уре			0000	00d0		00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	0
	_							0000	00e0		00	00	00	00	00	00	00	00		00	00	00	00	00	00	00	•
	lf32_Word				lag			0000	00f0		00	00	00	00	00	00	00	00	1f	00	00	00	01	00	00	00	
E	lf32_Addr		S	h_a	ddr	<i>;</i>		0000	0100		06	00	00	00	00	00	00	00	34	00	00	00	46	00	00	00	1
E	lf32 Off		S	h c	ffs	et;		0000	0110		00	00	00	00	00	00	00	00	04	00	00	00	00	00	00	00	
E	lf32 Word		S	h s	ize			0000	0120	J	1b	00	00	00	09	00	00	00	00	00	00	00	00	00	00	00	2
	lf32 Word			0130		48	03	00	00	30	00	00	00	07	00	00	00	01	00	00	00	4					
	_		0000	0140		04		00	00	80	00	00	00	25	00	00	00	01	00	00	00	_					
E	lf32_Word		S	h_i	nfo);		0000	0150		03	00	00	00	00	00	00	00	7c	00	00	00	05	00	00	00	3
E	lf32 Word		S	h a	.ddr	ali	gn;		0160		00		00			00	00			00	00			00		00	
E	lf32 Word		S	h e	nts	ize	:	0000	0170	J	2b	00	00	00	80	00	00	00	03	00	00	00	00	00	00	00	4
_			_				′	0000	0180		84	00	00	00	00	00	00	00		00	00	00		00	00	00	1
		_				_		0000	0190		04	00	00		00		00		_	00	00	00	07		00	00	
	Indeks na	λZi	va	ı se	kci	je u		0000	01a0		00	00	00	00	00	00	00	00	84	00	00	00	14	00	00	00	5
	tabeli strii	na	OV	ıa s	eko	ciie		0000	01b0		00	00	00	00	00	00	00	00	01	00	00			00	00	00	
		_				٠.,٠		0000	01c0		11	00	00	00	03	00	00	00	00	00	00	00	00	00	00	00	6
	zaglavlja.	ı						0000	01d0		98	00	00	00	36	00	00	00	00	00	00	00	00	00	00	00	U
			0000	01e0	١.	01	00	00	00	00	00	00	00	01	00	00	00	02	00	00	00						
								0000	01f0		00	00	00	00	00	00	00	00	38	02	00	00	d0	00	00	00	7
								0000	0200		80	00	00	00	07	00	00	00	04	00	00	00	10	00	00		_
									0210		09	00	00		03	00	00	00	00	00	00	00	00	00	00	00	8
								0000	0220		80	03	00	00	40	00	00	00	00	00	00	00	00	00	00	00	O
			0000	0230		01	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00						

	86000000		00	01	02	03	04	05	06	07	08	09	0a	0b	0)c (0d	0e	0f							
	00000098		69	33	38	36	00	00	00	00	00	2e	73	79	6	5d '	74	61	62		i38	86		3	ymta	ab
	000000a0		00	2e	73	74	72	74	61	62	00	2e	73	68	7	73	74	72	74		5	strt	ab.	5	hsti	rt
	000000b0		61	62	00	2e	72	65	6c	2e	74	65	78	74	0	00 2	2e	64	61		ab.	.re	1.1	ex	t	ia
E	000000c0	1	74	61	00	2e	62	73	73	00	2e	6е	6f	74	6	55 (00	00	00		ta.	.bs	s	no	te.	
	lf32 Word		g	h t	уре	٠.		0000	00d0		nema	00	00	00 0	0	00 0	00	00	00	00	00	00	00	00	00	0
	lf32_Word								00e0		00 00	00					00		00	00	00		00	00		•
	_				lag				00f0		00 00	00		00 0		00 0		.tex		00	00	01			00	
Е	lf32_Addr	•	S	n_a	ddr	i			0100		06 00	00	00	00 0	0	00 0	00	34	00			46		00	00	1
E	lf32 Off		S	h c	ffs	et;			0110		00 00	00		00 0		00 (04			00	00		00	00	
E	lf32 Word	l			ize				0120	1 -	rel oo	00		09 0		00 0	00		00	00	00	00	00	00	00	2
	lf32 Word		_	ink				0130		48 03			30 0		00 0		07		00	00	01		00	00	4	
	_			•			0140		04 00	00		08 0		00 (.da		0.0	00	01	00	00	00	_		
Е	lf32_Word	l	S	n_1	nfo);			0150		03 00	00	00	00 0	0	00 0	00	7c	00	00		05			00	3
E	lf32_Word	l	S	h_a	.ddr	ali	gn;		0160		00 00	00		00 0		00 (04			00	00			00	
Е	lf32 Word	l	S	h e	nts	ize	:		0170		bss	0.0		08 0		00 0		03			00	00			00	4
				_			′		0180		84 00					00 0		00		00	00	00		00		•
						_			0190		04 00	00		00 0		00 (.not		0.0	0.0	07		00	00	
	Indeks na	λZi	va	ı se	kci	je u			01a0		00 00	00	00	00 0	0	00 0	00	84	00		00	14			00	5
	tabeli strii	na	IO۷	a s	eko	ciie			01b0		00 00	00		00 0		00 0		01			00	00			00	
	zaglavlja.	_	, –			- , -			01c0		shstrta						00		00	00		00			00	6
	zagiavija.	1							01d0		98 00	00		36 0		00 0		00		00	00	00		00		0
				01e0		01 00	00		00 0		00 (nta		00	02			00	_					
				01f0		00 00	00		00 0		00 0			02	00		d0			00	7					
						0200		08 00	00				00 (04		00		10		00					
				0210	-	strtab	0.0		03 0	0	00 0		00			00	00			00	8					
				0220		08 03	00			_		00	00			00	00			00	0					
			0000	0230		01 00	00	00	00 0	0	00 0	00	00	00	00	00	00	00	00	00						

	Name	Value	
	SHT_NULL	0	r
	SHT_PROGBITS	1	•
L	SHT_SYMTAB	2	
	SHT_STRTAB	3	
	SHT_RELA	4	
	SHT_HASH	5	
	SHT_DYNAMIC	6	
	SHT_NOTE	7	
	SHT_NOBITS	8	
	SHT_REL	9	
	SHT_SHLIB	10	
	SHT_DYNSYM	11	gn
	SHT_LOPROC	0x70000000	;
	SHT_HIPROC	0x7fffffff	
	SHT_LOUSER	0x80000000	
	SHT_HIUSER	0xffffffff	

Definiše tip i značenje sadržaja sekcije.

r tabele zaglavlja sekcija

	000000d0	00	01	02	03	04	05	06	07	08	09	0a	0b	0c	0d	0e	٥f	
										`								
	000000d0	nei		0.0	00	00	00	00	00	00	00	00	00	00	00	00	00	0
	000000e0	00	00	00	00	00	00	00	00	00		00	00	00	00	00	00	
	000000f0	00	00	00	00	00	00	00	00	.te	xt ₀	0.0	0.0	01	00	00	00	
	00000100	06	00	00	00	00	00	00	00	34	00	00	00	46	00	00	00	1
	00000110	00	00	00	00	00	00	00	00	04	00	00	00	00	00	00	00	
	00000120	ī.re	0.0	00	00	09	00	00	00	00	00	00	00	00	00	00	00	2
	00000130	48	03	00	00	30	00	00	00	07	00	00	00	01	00	00	00	2
	00000140	04	00	00	00	80	00	00	00	da	ta	0.0	00	01	00	00	00	
	00000150	03	00	00	00	00	00	00	00	7c	00	00	00	05	00	00	00	3
n;	00000160	00	00	00	00	00	00	00	00	04	00	00	00	00	00	00	00	
,	00000170	.bs	S 00	0.0	0.0	80	00	00	00	03	00	00	00	00	00	00	00	4
	00000180	84	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	4
	00000190	04	00	00	00	00	00	00	00	.no	te		00	07	00	00	00	
	000001a0	00	00	00	00	00	00	00	00	84	00	00	00	14	00	00	00	5
	000001b0	00	00	00	00	00	00	00	00	01	00	00	00	00	00	00	00	_
	000001c0	.sh	strta	ab	00	03	00	00	00	00	00	00	00	00	00	00	00	
	000001d0	98	00	00	00	36	00	00	00	00	00	00	00	00	00	00	00	6
	000001e0	01	00	00	00	00	00	00	00	.sy	mta	ιbio	00	02	00	00	00	
	000001f0	00	00	00	00	00	00	00	00	38	02	00	00	d0	00	00	00	7
	00000200	08	00	00	00	07	00	00	00	04	00	00	00	10	00	00	00	
	00000210	.str	tab	00	00	03	00	00	00	00	00	00	00	00	00	00	00	٠,
	00000220	08	03	00	00	40	00	00	00	00	00	00	00	00	00	00	00	8
	00000230	01	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	

Elf32 Word sh name; 000000d0 00 01 02 03 04 05 06 07	08 09 0a 0b	0c 0d 0e 0f	
	00 00 00 00	00 00 00 00	0
_ <u> </u>	00 00 00 00	00 00 00 00	U
	.text o oo oo	01 00 00 00	
Elf32_Addr sh_addr; 00000100 06 00 00 00 00 00 00	34 00 00 00	46 00 00 00	1
Elf32 Off sh offset; 00000110 00 00 00 00 00 00 00	04 00 00 00	00 00 00 00	
Elf32 Word sh size;	00 00 00 00	00 00 00 00	2
Tlf22 Word ab link 00000130 48 03 00 00 30 00 00 00	07 00 00 00	01 00 00 00	2
	.data 👓 👓	01 00 00 00	
Elf32_Word sh_info; 00000150 03 00 00 00 00 00 00	7c 00 00 00	05 00 00 00	3
Elf32 Word sh addralign; 00000160 00 00 00 00 00 00 00	04 00 00 00	00 00 00 00	
Elf32 Word sh entsize; 00000170 bss 00 00 08 00 00 00	03 00 00 00	00 00 00 00	4
00000180 84 00 00 00 00 00 00	00 00 00 00	00 00 00 00	1
	.note	07 00 00 00	
Flegovi: 000001a0 00 00 00 00 00 00 00	84 00 00 00	14 00 00 00	5
00000000000000000000000000000000000000	01 00 00 00	00 00 00 00	
Name Value .shstrtab 00 03 00 00 00	00 00 00 00	00 00 00 00	6
001d0 98 00 00 00 36 00 00 00 _	00 00 00 00	00 00 00 00	•
DIII WILLIE	.symtab 🛚 👊	02 00 00 00	_
- 001f0 00 00 00 00 00 00 00	38 02 00 00	q0 00 00 00	7
SHF_ALLOC 0x2 00200 08 00 00 00 07 00 00 00	04 00 00 00	10 00 00 00	
00210 strtab 00 00 03 00 00 00	00 00 00 00	00 00 00 00	8
SHF_EXECINSTR 0x4 00220 08 03 00 00 40 00 00 00	00 00 00 00	00 00 00 00	•
SHF_MASKPROC 0xf0000000 00000 00 00 00 00 00 00 00 00 0	00 00 00 00	00 00 00 00	

```
Elf32 Word
             sh name;
Elf32 Word
             sh type;
             sh_flags;
Elf32 Word
Elf32 Addr
            sh addr;
Elf32 Off
             sh offset;
Elf32 Word
             sh size;
             sh link;
Elf32 Word
Elf32 Word
             sh info;
Elf32 Word
             sh addralign;
             sh_entsize;
Elf32 Word
```

Virtuelna adresa prvog bajta ukoliko sekcija treba da bude u memoriji u toku izvršavanja.

	0f	0e	0d	0c	0b	0a	09	08	07	06	05	04	03	02	01	00	000000d0
0	00	00	00	00	00	00	00	00	00	00	00	00	00	0.0	ma	nei	000000d0
v	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	000000e0
	00	00	00	01	00	0.0	kt o	.tex	00	00	00	00	00	00	00	00	000000f0
1	00	00	00	46	00	00	00	34	00	00	00	00	00	00	00	06	00000100
	00	00	00	00	00	00	00	04	00	00	00	00	00	00	00	_ 00	00000110
2	00	00	00	00	00	00	00	00	00	00	00	09	00	00	00	\].rel	00000120
2	00	00	00	01	00	00	00	07	00	00	00	30	00	00	03	48	00000130
	00	00	00	01	00	0.0	ta	.da	00	00	00	80	00	00	00	04	00000140
3	00	00	00	05	00	00	00	7c	00	00	00	00	00	00	00	03	00000150
	00	00	00	00	00	00	00	04	00	00	00	00	00	00	00	00	00000160
4	00	00	00	00	00	00	00	03	00	00	00	80	00	0.0	S].bs	00000170
7	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	84	00000180
	00	00	00	07	00	0.0	te	.no	00	00	00	00	00	00	00	04	00000190
5	00	00	00	14	00	00	00	84	00	00	00	00	00	00	00	00	000001a0
	00	00	00	00	00	00	00	01	00	00	00	00	00	00	00	00	000001b0
6	00	00	00	00	00	00	00	00	00	00	00	03	00	ab	strt].sh	000001c0
U	00	00	00	00	00	00	00	00	00	00	00	36	00	00	00	98	000001d0
	00	00	00	02	00	ıbo	mta	.sy	00	00	00	00	00	00	00	01	000001e0
7	00	00	00	d0	00	00	02	38	00	00	00	00	00	00	00	00	000001f0
	00	00	00	10	00	00	00	04	00	00	00	07	00	00	00	08	00000200
8	00	00	00	00	00	00	00	00	00	00	00	03	00	0.0	tab	.str	00000210
O	00	00	00	00	00	00	00	00	00	00	00	40	00	00	03	08	00000220
	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	01	00000230

```
Elf32 Word
            sh name;
Elf32 Word
            sh type;
Elf32 Word
            sh flags;
            sh addr;
Elf32 Addr
            sh offset;
Elf32 Off
Elf32 Word
            sh size;
            sh link;
Elf32 Word
Elf32 Word
            sh info;
Elf32 Word
            sh addralign;
            sh_entsize;
Elf32 Word
```

Ofset prvog bajta sekcije u odnosu na početak fajla, računato u bajtovima. Ako sekcija nema sadržaj u fajlu, onda SHT NOBITS.

000000d0	00	01	02	03	04	05	06	07		80	09	0a	0b	0c	0d	0e	0f		
000000d0	ne	ma	0.0	00	00	00	00	00		00	00	00	00	00	00	00	00	_	ſ
000000e0	00	00	00	00	00	00	00	00	_	00	00	00	00	00	00	00	00		١
000000f0	00	00	00	00	00	00	00	00		.te>	(to	0.0	00	01	00	00	00		
00000100	06	00	00	00	00	00	00	00		34	00	00	00	46	00	00	00		1
00000110	_ 00	00	00	00	00	00	00	00		04	00	00	00	00	00	00	00		
00000120	ૌ.re	00	00	00	09	00	00	00		00	00	00	00	00	00	00	00		,
00000130	48	03	00	00	30	00	00	00	_	07	00	00	00	01	00	00	00		4
00000140	04	00	00	00	08	00	00	00	_[.da	ta	0.0	00	01	00	00	00		
00000150	03	00	00	00	00	00	00	00		7c	00	00	00	05	00	00	00		į
00000160	00	00	00	00	00	00	00	00		04	00	00	00	00	00	00	00		
00000170	.bs	SOO		0.0	80	00	00	00		03	00	00	00	00	00	00	00		,
00000180	84	00	00	00	00	00	00	00		00	00	00	00	00	00	00	00		
00000190	04	00	00	00	00	00	00	00		.no	te	0.0	00	07	00	00	00		
000001a0	00	00	00	00	00	00	00	00		84	00	00	00	14	00	00	00		Į
000001b0	00	00	00	00	00	00	00	00		01	00	00	00	00	00	00	00		
000001c0	[.sh	strt	ab	0.0	03	00	00	00		00	00	00	00	00	00	00	00		,
000001d0	98	00	00	00	36	00	00	00	_	00	00	00	00	00	00	00	00		•
000001e0	01	00	00	00	00	00	00	00		.syı	mta	b	00	02	00	00	00		
000001f0	00	00	00	00	00	00	00	00	_(38	02	00	00	d0	00	00	00		
00000200	08	00	00	00	07	00	00	00		04	00	00	00	10	00	00	00	_	
00000210	.st	rtab	0.0	00	03	00	00	00		00	00	00	00	00	00	00	00		(
00000220	08	03	00	00	40	00	00	00	_	00	00	00	00	00	00	00	00		•
00000230	01	00	00	00	00	00	00	00		00	00	00	00	00	00	00	00		

```
Elf32 Word
            sh name;
Elf32 Word
            sh type;
Elf32 Word
           sh flags;
Elf32 Addr
            sh addr;
            sh offset;
Elf32 Off
Elf32 Word | sh size;
            sh link;
Elf32 Word
Elf32 Word
            sh info;
Elf32 Word
            sh addralign;
            sh entsize;
Elf32 Word
```

Veličina sekcije u bajtovima. Čak i sekcije koje ne zauzimaju prostor u fajlu mogu da imaju veličinu.

000000000	00	01	02	03	04	05	06	07		80	09	0a	0b	0c	0d	0e	0f	
000000d0	ner	ma	0.0	00	00	00	00	00		00	00	00	00	00	00	00	00	. (
000000e0	00	00	00	00	00	00	00	00]_	00	00	00	00	00	00	00	00	U
000000f0	00	00	00	00	00	00	00	00		tex	(t) o	0.0	00	01	00	00	00	
00000100	06	00	00	00	00	00	00	00		34	00	00	00	46	00	00	00	1
00000110	00	00	00	00	00	00	00	00		04	00	00	00	00	00	00	00	
00000120	rel	00	00	00	09	00	00	00		00	00	00	00	00	00	00	00	
00000130	48	03	00	00	30	00	00	00		07	00	00	00	01	00	00	00	2
00000140	04	00	00	00	80	00	00	00	1	dat	ta	0.0	00	01	00	00	00	
00000150	03	00	00	00	00	00	00	00		7c	00	00	00	05	00	00	00	3
00000160	00	00	00	00	00	00	00	00		04	00	00	00	00	00	00	00	
00000170	bs	S)0	0.0	00	80	00	00	00		03	00	00	00	00	00	00	00	,
00000180	84	00	00	00	00	00	00	00	$\Big]_{-}$	00	00	00	00	00	00	00	00	4
00000190	04	00	00	00	00	00	00	00	ſ.	not	te	0.0	00	07	00	00	00	
000001a0	00	00	00	00	00	00	00	00		84	00	00	00	14	00	00	00	ŗ
000001b0	00	00	00	00	00	00	00	00		01	00	00	00	00	00	00	00	
000001c0	.sh	strta	ab	00	03	00	00	00		00	00	00	00	00	00	00	00	,
000001d0	98	00	00	00	36	00	00	00]	00	00	00	00	00	00	00	00	6
000001e0	01	00	00	00	00	00	00	00		syr	nta	ıbo	00	02	00	00	00	
000001f0	00	00	00	00	00	00	00	00		38	02	00	00	d0	00	00	00	7
00000200	08	00	00	00	07	00	00	00		04	00	00	00	10	00	00	00	
00000210	str	tab	00	00	03	00	00	00		00	00	00	00	00	00	00	00	٠,
00000220	80	03	00	00	40	00	00	00	_	00	00	00	00	00	00	00	00	8
00000230	01	00	00	00	00	00	00	00	ſ	00	00	00	00	00	00	00	00	
			_															

```
Elf32 Word
            sh name;
Elf32 Word
            sh type;
Elf32 Word
            sh flags;
Elf32 Addr
            sh addr;
            sh offset;
Elf32 Off
Elf32 Word
            sh size;
Elf32 Word
            sh link;
Elf32 Word
            sh info;
Elf32 Word
            sh addralign;
            sh_entsize;
Elf32 Word
```

Ovo i naredno polje imaju posebno značenje.

000000d0	00 01	02 03	04	05	06	07	08	09	0a	0b	0c	0d	0e	0f	
000000d0	nema	00 00	00	00	00	00	00	00	00	00	00	00	00	00	^
000000e0	00 00	00 00	00	00	00	00	00	00	00	00	00	00	00	00	0
000000f0	00 00	00 00	00	00	00	00	.te	xto	0.0	00	01	00	00	00	
00000100	06 00	00 00	00	00	00	00	34	00	00	00	46	00	00	00	1
00000110	00 00	00 00	00	00	00	00	04	00	00	00	00	00	00	00	
00000120	rel oo	00 00	09	00	00	00	00	00	00	00	00	00	00	00	_
00000130	48 03	00 00	30	00	00	00	07	00	00	00	01	00	00	00	2
00000140	04 00	00 00	08	00	00	00	.da	ita	0.0	00	01	00	00	00	
00000150	03 00	00 00	00	00	00	00	7c	00	00	00	05	00	00	00	3
00000160	00 00	00 00	00	00	00	00	04	00	00	00	00	00	00	00	
00000170	.bss	00 00	80	00	00	00	03	00	00	00	00	00	00	00	1
00000180	84 00	00 00	00	00	00	00	00	00	00	00	00	00	00	00	4
00000190	04 00	00 00	00	00	00	00	.nc	te	0.0	00	07	00	00	00	
000001a0	00 00	00 00	00	00	00	00	84	00	00	00	14	00	00	00	5
000001b0	00 00	00 00	00	00	00	00	01	00	00	00	00	00	00	00	Ŭ
000001c0	.shstrt	ab 👓	03	00	00	00	00	00	00	00	00	00	00	00	_
000001d0	98 00	00 00	36	00	00	00	00	00	00	00	00	00	00	00	6
000001e0	01 00	00 00	00	00	00	00	.sy	mta	ıbo	0.0	02	00	00	00	
000001f0	00 00	00 00	00	00	00	00	38	02	00	00	d0	00	00	00	7
00000200	08 00	00 00	07	00	00	00	04	00	00	00	10	00	00	00	
00000210	strtab	00 00	03	00	00	00	00	00	00	00	00	00	00	00	
00000220	08 03	00 00	40	00	00	00	00	00	00	00	00	00	00	00	8
00000230	01 00	00 00	00	00	00	00	00	00	00	00	00	00	00	00	
							_								

Značenje polja sh_link i sh_info

sh_type	sh_link	sh_info
SHT_DYNAMIC	The section header index of the string table used by entries in the section.	0
SHT_HASH	The section header index of the symbol table to which the hash table applies.	0
SHT_REL SHT_RELA	The section header index of the associated symbol table.	The section header index of the section to which the relocation applies.
SHT_SYMTAB SHT_DYNSYM	This information is operating system specific.	This information is operating system specific.
other	SHN_UNDEF	0

```
Elf32 Word
            sh name;
Elf32 Word
            sh type;
Elf32 Word sh_flags;
Elf32 Addr
            sh addr;
Elf32 Off
            sh offset;
Elf32 Word
            sh size;
Elf32 Word
            sh link;
Elf32 Word
           sh info;
Elf32 Word
            sh addralign;
            sh entsize;
Elf32 Word
```

Značenje opisano na prethodnom slajdu.

	0f	0e	0d	0c	0b	0a	09	80	07	06	05	04	03	02	01	00	000000d0
0	00	00	00	00	00	00	00	00	00	00	00	00	00	0.0	na	ner	000000d0
U	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	000000e0
	00	00	00	01	00		<to< th=""><th>.tex</th><th>00</th><th>00</th><th>00</th><th>00</th><th>00</th><th>00</th><th>00</th><th>00</th><th>000000f0</th></to<>	.tex	00	00	00	00	00	00	00	00	000000f0
1	00	00	00	46	00	00	00	34	00	00	00	00	00	00	00	06	00000100
	00	00	00	00	00	00	00	04	00	00	00	00	00	00	00	00	00000110
2	00	00	00	00	00	00	00	00	00	00	00	09	00	0.0	00	rel_	00000120
2	00	00	00	01	00	00	00	07	00	00	00	30	00	00	03	48	00000130
	00	00	00	01	00	0.0	ta	.da	00	00	00	80	00	00	00	04	00000140
3	00	00	00	05	00	00	00	7c	00	00	00	00	00	00	00	03	00000150
	00	00	00	00	00	00	00	04	00	00	00	00	00	00	00	00	00000160
4	00	00	00	00	00	00	00	03	00	00	00	80	00		SIO	.bs	00000170
4	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	84	00000180
	00	00	00	07	00	0.0	te	.no	00	00	00	00	00	00	00	04	00000190
5	00	00	00	14	00	00	00	84	00	00	00	00	00	00	00	00	000001a0
	00	00	00	00	00	00	00	01	00	00	00	00	00	00	00	00	000001b0
6	00	00	00	00	00	00	00	00	00	00	00	03	00	ab	strt	[.sh	000001c0
O	00	00	00	00	00	00	00	00	00	00	00	36	00	00	00	98	000001d0
	00	00	00	02	00	b	mta	.syı	00	00	00	00	00	00	00	01	000001e0
7	00	00	00	d0	00	00	02	38	00	00	00	00	00	00	00	00	000001f0
	00	00	00	10	00	00	00	04	00	00	00	07	00	00	00	80	00000200
8	00	00	00	00	00	00	00	00	00	00	00	03	00	0.0	tab	.str	00000210
0	00	00	00	00	00	00	00	00	00	00	00	40	00	00	03	80	00000220
	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	01	00000230
								_									

```
Elf32 Word
            sh name;
Elf32 Word
            sh type;
Elf32 Word
           sh flags;
Elf32 Addr
            sh addr;
Elf32 Off
            sh offset;
Elf32 Word
            sh size;
Elf32 Word
            sh link;
            sh info;
Elf32 Word
Elf32 Word
            sh addralign;
            sh entsize;
Elf32 Word
```

Poravnanje sekcije. 0 ili 1 znače da nije zahtevano posebno poravnanje. Osim 0 i 1, dozvoljeni su samo stepeni broja 2.

000000d0	00	01	02	03	04	05	06	07		80	09	0a	0b	00	0d	0e	0f	
000000d0	ner	na	0.0	00	00	00	00	00		00	00	00	00	00	00	00	00	-
000000e0	00	00	00	00	00	00	00	00	_	00	00	00	00	00	00	00	00	
000000f0	00	00	00	00	00	00	00	00		.tex	to	0.0	0.0	01	00	00	00	
00000100	06	00	00	00	00	00	00	00		34	00	00	00	46	00	00	00	
00000110	00	00	00	00	00	00	00	00		04	00	00	00	00	00	00	00	
00000120	rel.			00	09	00	00	00		00	00	00	00	00	00	00	00	
00000130	48	03	00	00	30	00	00	00		07	00	00	00	01	00	00	00	
00000140	04	00	00	00	08	00	00	00	1	da	ta	0.0	0.0	01	00	00	00	
00000150	03	00	00	00	00	00	00	00		7c	00	00	00	05	00	00	00	
00000160	00	00	00	00	00	00	00	00		04	00	00	00	00	00	00	00	
00000170	bs	S)0	0.0	00	80	00	00	00		03	00	00	00	00	00	00	00	
00000180	84	00	00	00	00	00	00	00		00	00	00	00	00	00	00	00	
00000190	04	00	00	00	00	00	00	00		no	te	0.0	00	07	00	00	00	
000001a0	00	00	00	00	00	00	00	00	_	84	00	00	00	14	00	00	00	
000001b0	00	00	00	00	00	00	00	00		01	00	00	00	00	00	00	00	
000001c0	.sh	strta	ab	0.0	03	00	00	00		00	00	00	00	00	00	00	00	
000001d0	98	00	00	00	36	00	00	00	_	00	00	00	00	00	00	00	00	
000001e0	01	00	00	00	00	00	00	00		.syr	nta	b	00	02	00	00	00	
000001f0	00	00	00	00	00	00	00	00		38	02	00	00	d0	00	00	00	
00000200	80	00	00	00	07	00	00	00		04	00	00	00	10	00	00	00	
00000210	str	tab	0.0	00	03	00	00	00		00	00	00	00	00	00	00	00	-
00000220	80	03	00	00	40	00	00	00	_	00	00	00	00	00	00	00	00	
00000230	01	00	00	00	00	00	00	00	J	00	00	00	00	00	00	00	00	
									_									

```
Elf32 Word
            sh name;
Elf32 Word
            sh type;
Elf32 Word
            sh flags;
Elf32 Addr
            sh addr;
Elf32 Off
            sh offset;
Elf32 Word
            sh size;
Elf32 Word
            sh link;
Elf32 Word
            sh info;
            sh addralign;
Elf32 Word
            sh entsize;
Elf32 Word
```

Ako sekcija sadrži ulaze fiksne veličine, ovo polje predstavlja veličinu jednog ulaza u bajtovima.

	000000d0	00	01	02	03	04	05	06	07		08	09	0a	0b	0c	0d	0e	0f	
	000000d0	ne	ma	0.0	0.0	00	00	00	00		00	00	00	00	00	00	00	00	
	000000e0	00	00	00	00	00	00	00	00	_	00	00	00	00	00	00	00	00	
	000000f0	00	00	00	00	00	00	00	00		.te>	(to	0.0	00	01	00	00	00	
	00000100	06	00	00	00	00	00	00	00		34	00	00	00	46	00	00	00	1
	00000110	00	00	00	00	00	00	00	00		04	00	00	00	00	00	00	00	
	00000120	re.	00		00	09	00	00	00		00	00	00	00	00	00	00	00	
	00000130	48	03	00	00	30	00	00	00	_	07	00	00	00	01	00	00	00	4
	00000140	04	00	00	00	08	00	00	00	1	.da	ta	0.0	00	01	00	00	00	
	00000150	03	00	00	00	00	00	00	00		7c	00	00	00	05	00	00	00	3
:	00000160	_00	00	00	00	00	00	00	00		04	00	00	00	00	00	00	00	
<u>'</u>	00000170	.bs	SIO	0.0	00	08	00	00	00		03	00	00	00	00	00	00	00	
J	00000180	84	00	00	00	00	00	00	00		00	00	00	00	00	00	00	00	-
	00000190	04	00	00	00	00	00	00	00		.no	te	0.0	00	07	00	00	00	
	000001a0	00	00	00	00	00	00	00	00		84	00	00	00	14	00	00	00	ŗ
	000001b0	_00	00	00	00	00	00	00	00		01	00	00	00	00	00	00	00	
	000001c0	sh	strt	ab	00	03	00	00	00		00	00	00	00	00	00	00	00	
	000001d0	98	00	00	00	36	00	00	00	_	00	00	00	00	00	00	00	00	(
	000001e0	01	00	00	00	00	00	00	00		.syr	nta	b	00	02	00	00	00	
	000001f0	00	00	00	00	00	00	00	00		38	02	00	00	d0	00	00	00	
	00000200	08	00	00	00	07	00	00	00		04	00	00	00	10	00	00	00	
	00000210	stı.	tab	0.0	00	03	00	00	00		00	00	00	00	00	00	00	00	-
	00000220	80	03	00	00	40	00	00	00		00	00	00	00	00	00	00	00	ì
	00000230	01	00	00	00	00	00	00	00		00	00	00	00	00	00	00	00	

Standardno prisutne sekcije

Name	Type	Attributes
.bss	SHT_NOBITS	SHF_ALLOC+SHF_WRITE
.comment	SHT_PROGBITS	none
.data	SHT_PROGBITS	SHF_ALLOC + SHF_WRITE
.data1	SHT_PROGBITS	SHF_ALLOC + SHF_WRITE
. debug	SHT_PROGBITS	none
.dynamic	SHT_DYNAMIC	see below
.hash	SHT_HASH	SHF_ALLOC
.line	SHT_PROGBITS	none
.note	SHT_NOTE	none
.rodata	SHT_PROGBITS	SHF_ALLOC
.rodata1	SHT_PROGBITS	SHF_ALLOC
.shstrtab	SHT_STRTAB	none
.strtab	SHT_STRTAB	see below
.symtab	SHT_SYMTAB	see below
.text	SHT_PROGBITS	SHF_ALLOC + SHF_EXECINSTR

Struktura ulaza u tabeli simbola

```
typedef struct {
        Elf32_Word st_name;
        Elf32_Addr st_value;
        Elf32_Word st_size;
        unsigned char st_info;
        unsigned char st_other;
        Elf32_Half st_shndx;
} Elf32_Sym;
```

Primjer tabele zaglavlja sekcija (ponovljeno)

```
Elf32 Word
            sh name;
Elf32 Word
            sh type;
Elf32 Word
            sh flags;
            sh addr;
Elf32 Addr
            sh offset:
Elf32 Off
Elf32 Word
            sh size;
            sh link;
Elf32 Word
Elf32 Word
            sh info;
Elf32 Word
            sh addralign;
Elf32 Word
            sh entsize;
```

Ofset prvog bajta sekcije u odnosu na početak fajla, računato u bajtovima. Ako sekcija nema sadržaj u fajlu, onda SHT NOBITS.

	000000d0		00	01	02	03	04	05	06	07		80	09	0a	0b	0c	0d	0e	0f	
	000000d0	I	ner	na	0.0	00	00	00	00	00		00	00	00	00	00	00	00	00	٠,
	000000e0	lì	00	00	00	00	00	00	00	00	_	00	00	00	00	00	00	00	00	
	000000f0	<u> </u>	00	00	00	00	00	00	00	00	J	.te>	(to	0.0	00	01	00	00	00	
	00000100	╹	06	00	00	00	00	00	00	00	_	34	00	00	00	46	00	00	00	1
	00000110	L	00	00	00	00	00	00	00	00		04	00	00	00	00	00	00	00	
	00000120	٦	.rel	00	00	00	09	00	00	00		00	00	00	00	00	00	00	00	
	00000130		48	03	00	00	30	00	00	00		07	00	00	00	01	00	00	00	4
	00000140		04	00	00	00	80	00	00	00	_[.da	ta	0.0	00	01	00	00	00	
	00000150	┖	03	00	00	00	00	00	00	00		7с	00	00	00	05	00	00	00	
;	00000160	L	00	00	00	00	00	00	00	00		04	00	00	00	00	00	00	00	
•	00000170	١٦	.bs	S 00		00	80	00	00	00		03	00	00	00	00	00	00	00	
	00000180		84	00	00	00	00	00	00	00		00	00	00	00	00	00	00	00	•
	00000190		04	00	00	00	00	00	00	00		.no	te	0.0	00	07	00	00	00	
	000001a0	ľ	00	00	00	00	00	00	00	00		84	00	00	00	14	00	00	00	ļ
	000001b0	L	00	00	00	00	00	00	00	00		01	00	00	00	00	00	00	00	
	000001c0	I	.sh	strta	ab	00	03	00	00	00		00	00	00	00	00	00	00	00	
	000001d0	$\ $	98	00	00	00	36	00	00	00	_	00	00	00	00	00	00	00	00	
	000001e0	l Ì	01	00	00	00	00	00	00	00		.syı	nta	b	00	02	00	00	00	
	000001f0	Ι.	00	00	00	00	00	00	00	00	- [38	02	00	00	d0	00	00	00	
	00000200	١.	80	00	00	00	07	00	00	00		04	00	00	00	10	00	00	00	
	00000210		.str	tab	0.0	00	03	00	00	00		00	00	00	00	00	00	00	00	-
	00000220		80	03	00	00	40	00	00	00	_	00	00	00	00	00	00	00	00	1
	00000230	_ ا	01	00	00	00	00	00	00	00		00	00	00	00	00	00	00	00	

```
Elf32_Word st_name;
Elf32_Addr st_value;
Elf32_Word st_size;
unsigned char st_info;
unsigned char st_other;
Elf32_Half st_shndx;
```

Indeks u tabeli stringova (u ovom slučaju, odgovarajuća tabela stringova počinje na adresi 308; pogledati slajd 27, ulaz 8).

BC_BI	man,											
00000238	00 01	02 03	04 05	06 07	80	09	0a 0	b Oc	0d	0e	0f	
00000238	01 00	00 00	00 00	00 00	00	00	00 0	0 00	00	0.0	00	
00000240	00 00	00 00	00 00	00 00	00	00	00 0	0 00	00	00	00	
00000250	00 00	00 00	03 00	01 00	0.0	00	00 0	0 00	00	0.0	0.0	
00000260	00 00	00 00	03 00	03 00	00	00	00 0	0 00	00	00	00	
00000270	00 00	00 00	03 00	04 00	01	00	00 0	0 00	00	0.0	00	
00000280	00 00	00 00	00 00	03 00	Of	00	00 0	0 Oc	00	00	00	
00000290	00 00	00 00	00 00	01 00	0.0	00	00 0	0 00	00	0.0	0.0	
000002a0	00 00	00 00	03 00	05 00	14	00	00 0	0 00	00	00	00	
000002b0	00 00	00 00	10 00	01 00	1b	00	00 0	0 00	00	0.0	0.0	
000002c0	00 00	00 00	10 00	00 00	20	00	00 0	0 00	00	00	00	
000002d0	00 00	00 00	10 00	00 00	26	00	00 0	0 00	00	0.0	00	
000002e0	00 00	00 00	10 00	00 00	2a	00	00 0	0 00	00	00	00	*
000002f0	00 00	00 00	10 00	00 00	39	00	00 0	0 00	00	0.0	00	9
00000300	00 00	00 00	10 00	00 00	00	75	6c 6	1 7a	6e	69	5f	ulazni_
00000310	66 6f	72 6d	61 74	00 6d	61	69	6e 0	0 5f	73	74	61	format.mainsta
00000320	72 74	00 65	78 69	74 00	73	63	61 6	e 66	00	6d	69	rt.exit.scanf.mi
00000330	6e 00	69 7a	6c 61	7a 6e	69	5f	66 6	f 72	6d	61	74	n.izlazni_format
00000340	00 70	72 69	6e 74	66 00	80	00	00 0	0 02	80	00	00	.printf

```
Elf32_Word st_name;
Elf32_Addr st_value;
Elf32_Word st_size;
unsigned char st_info;
unsigned char st_other;
Elf32_Half st_shndx;
```

Vrijednost simbola. Može biti apsolutna ili relokatibilna.

- -za relokatibilan fajl, to je ofset u odnosu na početak sekcije (relokatibilan fajl)
- -za izvršni fajl ili deljenu biblioteku, to je virtuelna adresa.

		,															
00000238	00	01	02	03	04	05	06	07	80	09	0a	0b	0c	0d	0e	0f	
00000238	01	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	
00000240	00	0.0	0.0	00	0.0	0.0	0.0	00	00	00	00	00	00	00	00	00	
00000250	00	00	00	00	03	00	01	00	00	00	00	00	00	00	00	0.0	
00000260	00	00	0.0	00	03	0.0	03	0.0	00	00	00	00	00	00	00	00	
00000270	00	00	00	00	03	00	04	00	01	00	00	00	00	00	0.0	0.0	
00000280	00	00	0.0	00	0.0	0.0	03	00	0f	00	00	00	0c	00	00	00	
00000290	00	00	00	00	00	00	01	00	00	00	0.0	00	00	00	0.0	0.0	
000002a0	0.0	00	0.0	00	03	00	05	00	14	00	00	00	00	00	00	00	
000002b0	00	00	00	00	10	00	01	00	1b	00	00	00	00	00	0.0	0.0	
000002c0	00	00	0.0	00	10	00	0.0	00	20	00	00	00	00	00	00	00	
000002d0	00	00	00	00	10	00	00	00	26	00	00	00	00	00	00	0.0	
000002e0	0.0	00	0.0	00	10	00	00	00	2a	00	00	00	00	00	00	00	*
000002f0	00	00	00	00	10	00	00	00	39	00	00	00	00	00	00	00	9
00000300	00	00	0.0	00	10	00	00	00	00	75	6с	61	7a	6e	69	5f	ulazni_
00000310	66	6f	72	6d	61	74	00	6d	61	69	6e	00	5f	73	74	61	format.mainsta
00000320	72	74	00	65	78	69	74	00	73	63	61	6e	66	00	6d	69	rt.exit.scanf.mi
00000330	6e	00	69	7a	6c	61	7a	6e	69	5f	66	6f	72	6d	61	74	n.izlazni_format
00000340	00	70	72	69	6e	74	66	00	80	00	00	00	02	80	00	00	.printf

```
Elf32 Word
                   st name;
                                      Veličina simbola, ako je poznata,
Elf32 Addr
                   st value;
Elf32 Word
                   st size:
unsigned char st info;
unsigned char st other;
Elf32 Half
                   st shndx;
                00000238
                           00 01
                                  02 03
                                                        08 09
                                                               0a 0b
                                                                      0c 0d
                                                                            0e 0f
                                         04 05
                                                06 07
                                         00 00 00 00
                00000238
                           01 00 00 00
                00000240
                                                                             00 00
                                                               00
                                                                 00
                                                                      00 00
                00000250
                                                01 00
                                  00 00
                                         03 00
                00000260
                                                               00 00
                                                                      00 00
                                                                             00 00
                00000270
                                  00 00
                                         03 00
                                                04 00
                                                                      00 00
                                                                             00 00
                00000280
                                                               00 00
                                                                      0c 00
                                                                             00 00
                00000290
                                         00 00
                                                01 00
                              00
                                  00 00
                                                                      00 00
                000002a0
                                                               00 00
                                                                      00 00
                                                                             00 00
                000002b0
                                  00 00
                                         10 00
                                                01 00
                                         10 00
                000002c0
                                                               00 00
                                                                      00 00
                                                                             00 00
                000002d0
                                         10 00
                                  00 00
                                                00 00
                000002e0
                                                                             00 00
                                                               00 00
                                                                      00 00
                000002f0
                                         10 00
                                                00 00
                                  00 00
                                                                                      . . . . . . . . 9 . . . . . . .
                00000300
                                                        00 75
                                                              6c 61
                                                                      7a 6e
                                                                            69 5f
                                                                                     ....ulazni
                00000310
                                                               6e 00
                                                                      5f 73
                                                                                     format.main. sta
                                                                             74 61
                00000320
                                  00 65
                                         78 69
                                                74 00
                                                               61 6e
                                                                      66 00
                                                                             6d 69
                                                                                     rt.exit.scanf.mi
                00000330
                                  69 7a
                                                                                     n.izlazni format
                                         6c 61
                                                                      72 6d
                00000340
                                                                                     .printf.....
                                  72 69
                                         6e 74
                                                                      02 08
                              70
                                                66 00
                                                               00 00
                                                                             00 00
```

```
Elf32_Word st_name;
Elf32_Addr st_value;
Elf32_Word st_size;
unsigned char st_info;
unsigned char st_other;
Elf32_Half st_shndx;
```

Viša 4 bita: vezivanje (tabela levo u sredini).

Niža 4 bita: tip (tabela dole levo).

		00000238	00	UI	UZ	03	04	UO	06 0	1	0.0	09	υa	αυ	UC	υα	ve	UI	
Name	Value	00000238	01	00	00	00	00	00	00 0	0	00	00	00	00	0.0	00	00	00	
- Name	value	00000240	0.0	00	0.0	0.0	0.0	00	00 0	0	00	00	00	00	00	00	00	00	
STB_LOCAL	0	00000250	00	00	00	00	03	00	01 0	0	00	0.0	00	00	00	00	00	00	
STB_GLOBAL	1	00000260	00	00	0.0	00	03	00	03 0	0	00	00	00	00	00	00	00	00	
STB_WEAK	2	00000270	00	00	00	00	03	00	04 0	0	01	00	0.0	00	0.0	00	00	00	
STB LOPROC	13	00000280	0.0	00	0.0	00	0.0	00	03 0	0	0f	00	00	00	0c	00	00	00	
_	15	00000290	00	00	00	00	00	00	01 0	0	00	0.0	00	00	0.0	00	0.0	00	
STB_HIPROC	15	000002a0	00	00	0.0	00	03	00	05 0	0	14	00	00	00	00	00	00	00	
		000002b0	00	00	00	00	10	00	01 0	0	1b	0.0	00	00	0.0	00	00	00	
<u> </u>		000002c0	0.0	00	0.0	0.0	10	00	00 0	0	20	00	00	00	00	00	00	00	
Name	Value	000002d0	00	00	00	00	10	00	00 0	0	26	0.0	0.0	00	0.0	00	0.0	00	
STT_NOTYPE	0	000002e0	00	00	0.0	00	10	00	00 0	0	2a	00	00	00	00	00	00	00	***************************************
STT_OBJECT	1	000002f0	00	00	00	00	10	00	00 0	0	39	0.0	00	00	0.0	00	00	00	9
STT_FUNC	2	00000300	00	00	0.0	00	10	00	00 0	0	00	75	6с	61	7a	6е	69	5f	ulazni_
STT_SECTION	3	00000310	66	6f	72	6d	61	74	00 6	d	61	69	6e	00	5f	73	74	61	format.mainsta
STT_FILE	4	00000320	72	74	00	65	78	69	74 0	0	73	63	61	6e	66	00	6d	69	rt.exit.scanf.mi
STT_LOPROC	13	00000330	6e	00	69	7a	6с	61	7a 6	e	69	5f	66	6f	72	6d	61	74	n.izlazni_format
STT_HIPROC	15	00000340	00	70	72	69	6e	74	66 0	0	80	00	00	00	02	80	00	00	.printf
			•																

```
Elf32 Word
                  st name;
                                    Za sada, fiksno 0.
Elf32 Addr
                  st value;
Elf32 Word
                  st size;
unsigned char st info;
unsigned char
                 st other;
Elf32 Half
                  st shndx;
               00000238
                          00 01
                                02 03
                                                     08 09
                                                           0a 0b
                                                                  0c 0d
                                                                         0e 0f
                                       04 05
                                              06 07
                                       00 00 00 00
               00000238
                          01 00 00 00
               00000240
                                                                         00 00
                                                            00
                                                              00
                                                                   00 00
               00000250
                                00 00
                                             01 00
                                          00
               00000260
                                             03 00
                                                            00 00
                                                                  00 00
                                                                         00 00
               00000270
                                00 00
                                          00
                                             04 00
                                                                  00 00
                                                                         00 00
               00000280
                                                            00 00
                                                                   0c 00
                                                                         00 00
               00000290
                                       00
                                          00
                                             01 00
                                00 00
                                                                  00 00
               000002a0
                                                            00 00
                                                                   00 00
                                                                         00 00
```

01 00

00 00

00 00

74 00

66 00

00 00

6c 61

61 6e

00 00

00

00 00

00 75

00 00

00 00

7a 6e

5f 73

66 00

72 6d

02 08

00 00

00 00

69 5f

74 61

6d 69

00 00

. 9

....ulazni

format.main. sta

rt.exit.scanf.mi

n.izlazni format

.printf.....

00

00

6e 74

10 00

00 00

00 00

00 00

72 6d

00 65

69 7a

72 69

70

000002b0

000002c0

000002d0

000002e0

000002f0

00000300

00000310

00000320

00000330

00000340

```
Elf32_Word st_name;
Elf32_Addr st_value;
Elf32_Word st_size;
unsigned char st_info;
unsigned char st_other;
Elf32_Half st_shndx;
```

Indeks sekcije u tabeli zaglavlja sekcija za koji je posmatrani simbol vezan.

00000238	00	01	02	03	04	05	06	07	08	09	0a	0b	0c	0d	0e	0f	
00000238	01	00	00	00	00	00	00	00	00	0.0	00	00	0.0	00	00	00	
00000240	0.0	00	0.0	00	0.0	00	0.0	0.0	00	00	00	00	00	00	00	00	
00000250	00	00	00	00	03	00	01	00	0.0	00	00	00	0.0	00	00	0.0	
00000260	0.0	00	0.0	00	03	00	03	00	00	00	00	00	00	00	00	00	
00000270	00	00	00	00	03	00	04	00	01	00	00	00	0.0	00	00	00	
00000280	0.0	00	00	00	0.0	00	03	00	0f	00	00	00	0c	00	00	00	
00000290	00	00	00	00	00	00	01	00	00	0.0	0.0	00	0.0	00	0.0	0.0	
000002a0	0.0	00	00	00	03	00	05	00	14	00	00	00	00	00	00	00	
000002b0	00	00	00	00	10	00	01	00	1b	00	00	00	0.0	00	0.0	0.0	
000002c0	00	00	00	00	10	00	0.0	00	20	00	00	00	00	00	00	00	
000002d0	00	00	00	00	10	00	00	00	26	00	00	00	0.0	00	00	0.0	
000002e0	0.0	00	00	00	10	00	00	00	2a	00	00	00	00	00	00	00	*
000002f0	00	00	00	00	10	00	00	00	39	00	00	00	0.0	00	00	00	9
00000300	0.0	00	00	00	10	00	00	00	00	75	6с	61	7a	6е	69	5f	ulazni_
00000310	66	6f	72	6d	61	74	00	6d	61	69	6e	00	5f	73	74	61	format.mainsta
00000320	72	74	00	65	78	69	74	00	73	63	61	6e	66	00	6d	69	rt.exit.scanf.mi
00000330	6e	00	69	7a	6с	61	7a	6e	69	5f	66	6f	72	6d	61	74	n.izlazni_format
00000340	00	70	72	69	6e	74	66	00	80	00	00	00	02	80	00	00	.printf

Struktura zapisa u tabelama relokacija

- Polje r_addend:
 - Sadrži neposrednu konstantu koju je pri relokaciji potrebno dodati na sadržaj lokacije koja se prepravlja (relocira).
 - Veoma često, ovo polje se ne koristi, već se konstanta upiše direktno kao početni sadržaj lokacije koja će se kasnije prepravljati – relocirati.

```
typedef struct {
        Elf32_Addr r_offset;
        Elf32_Word r_info;
} Elf32_Rel;

typedef struct {
        Elf32_Addr r_offset;
        Elf32_Word r_info;
        Elf32_Sword r_addend;
} Elf32_Rela;
```

Primjer tabele zaglavlja sekcija (ponovljeno)

Elf32_Word	sh_name;
Elf32_Word	sh_type;
Elf32_Word	sh_flags;
Elf32_Addr	sh_addr;
Elf32_Off	sh_offset;
Elf32_Word	sh_size;
Elf32_Word	sh_link;
Elf32_Word	sh_info;
Elf32_Word	sh_addralign
Elf32_Word	sh_entsize;

Ofset prvog bajta sekcije u odnosu na početak fajla, računato u bajtovima. Ako sekcija nema sadržaj u fajlu, onda SHT_NOBITS.

	000000d0		00	01	02	03	04	05	06	07	08	09	0a	0b	0c	0d	0e	0f	
	000000d0		ner	na	0.0	00	00	00	00	00	00	00	00	00	00	00	00	00	0
	000000e0		00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	U
	000000f0	_	00	00	00	00	00	00	00	00	.te	xto		00	< 01	00	00	00	
	00000100	╹	06	00	00	00	00	00	00	00	34	00	00	00	46	00	00	00	1
)	00000110		00	00	00	00	00	00	00	00	04	00	00	00	00	00	00	00	
J	00000120	•	.rel			00	09	00	00	00	00	00	00	00	00	00	00	00	
	00000130		48	03	00	00	30	00	00	00	07	00	00	00	01	00	00	00	/ 2
	00000140		04	00	00	00	08	00	00	00	.da	ata	0.0	00	01	00	00	00	
	00000150	•	03	00	00	00	00	00	00	00	7c	00	00	00	05	00	00	00	3
	00000160		00	00	00	00	00	00	00	00	04	00	00	00	00	00	00	00	
,	00000170	ľ	.bs	S)0	0.0	00	08	00	00	00	03	00	00	00	00	00	00	00	
	00000180		84	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	4
	00000190	ľ	04	00	00	00	00	00	00	00	.nc	ote	0.0	00	07	00	00	00	
	000001a0	ľ	00	00	00	00	00	00	00	00	84	00	00	00	14	00	00	00	5
	000001b0		00	00	00	00	00	00	00	00	01	00	00	00	00	00	00	00	-
	000001c0	ľ	.sh	strta	ab	00	03	00	00	00	00	00	00	00	00	00	00	00	
	000001d0	lì	98	00	00	00	36	00	00	00	00	00	00	00	00	00	00	00	6
	000001e0	ľ	01	00	00	00	00	00	00	00	.sy	mta	ab	00	02	00	00	00	
	000001f0	ľ	00	00	00	00	00	00	00	00	38		00	00	d0	00	00	00	7
	00000200		08	00	00	00	07	00	00	00	04	00	00	00	10	00	00	00	
	00000210	ľ	.str	tab	0.0	00	03	00	00	00	00	00	00	00	00	00	00	00	
	00000220		08	03	00	00	40	00	00	00	00	00	00	00	00	00	00	00	8
	00000230		01	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	

```
Elf32_Addr r_offset;
Elf32_Word r_info;
```

U zavisnosti od tipa fajla:

- -Predmetni fajl na ulazu linkera:
 - -Polje r_offset sadrži ofset lokacije na koju treba primeniti relokaciju. Ofset se računa u bajtovima, u odnosu na početak sekcije u kojoj se nalazi lokacija.
- -Predmetni fajl namenjen za pokretanje:
 - -Polje r_offset sadrži virtuelnu adresu lokacije na koju treba primeniti relokaciju.

00000340	00	70	72	69	6e	74	66	00	08	00	00	00	02	08	00	00
00000350	19	00	00	00	01	02	00	00	1e	00	00	00	02	09	00	00
00000360	2c	00	00	00	02	0a	00	00	38	00	00	00	01	0b	00	00
00000378	3d	00	00	00	02	0c	00	00								

```
Elf32_Addr r_offset;
Elf32_Word r_info;
```

Redni broj objekta u tabeli simbola u odnosu na koji se vrši relokacija.

00000340	00	70	72	69	6e	74	66	00	80	00	00	00	02	80	00	00
00000350	19	00	00	00	01	02	00	00	1e	00	00	00	02	09	00	00
00000360	2c	00	00	00	02	0a	00	00	38	00	00	00	01	0b	00	00
00000378	3d	00	00	00	02	0c	00	00								

```
Elf32_Addr r_offset;
Elf32_Word r_info;
```

Tip relokacija – zavisi od procesora. Za x86:

A – konstanta koja se dodaje,

S – vrednost simbola koji je referenciran,

P – adresa tekuće lokacije.

Name	Value	Field	Calculation
R_386_NONE	0	none	none
R_386_32	1	word32	S+A
R_386_PC32	2	word32	S+A-P

00	000340	00	70	72	69	6e	74	66	00	08	00	00	00	02	80	00	00
00	000350	19	00	00	00	01	02	00	00	1e	00	00	00	02	09	00	00
00	000360	2c	00	00	00	02	0a	00	00	38	00	00	00	01	0b	00	00
00	000378	3d	00	00	00	02)0c	00	00								

.data ulazni format

exit

UND izlazni format

printf

00 00

00 00

00 00

6e 74

01 02

02 0a

02 Oc

00 00

00 70 72 69

Tipovi relokacija:

Tabela simbola:

00 ld.text .text

00 l d .data .data

00 ld.bss .bss

00 l d .note .note
00 g .text start

UND

UND

UND min

19 00

2c 00

3d 00

.text main

UND scanf

R 386 32

00 1

0c 1

00

00

00

00

00

00000340

00000350

00000360

00000378

R 386 PC32

Disasemblirana .text sekcija sa relokacijama (-d -r):

```
000000000 < start>:
           e8 07 00 00 00
                              call
                                       c <main>
       5:
           6a 00
                                push $0x0
           e8 fc ff ff ff
                                 call 8 < start+0x8>
               8: R 386 PC32
                             exit
    0000000c <main>:
           c8 08 00 00
                                enter $0x8,$0x0
      18:
           68 00 00 00 00
                              push
                                       $0x0
               19: R 386 32 .data
           e8 fc ff ff ff
      1d:
                              call 1e <main+0x12>
               1e: R 386 PC32 scanf
      2b:
           e8 fc ff ff ff call 2c <main+0x20>
               2c: R 386 PC32 min
      37:
          68 00 00 00 00 push
                                      $0x0
               38: R 386 32 izlazni format
      3c:
           e8 fc ff ff ff
                                 call 3d <main+0x31>
               3d: R 386 PC32 printf
           83 c4 10
                                      $0x10,%esp
      41:
                                 add
      44:
           c9
                                 leave
      45:
           c3
                                 ret
                                Struktura relokacije:
       08 00
            00 00
                   02 08
                         0.0
                            00
66 00
                                Elf32 Addr
00 00
                                              r offset;
       1e 00
             00 00
                   02 09
                         0.0
                            00
                                Elf32 Word
                                              r info;
       38 00
00 00
            00 00
                   01 0b
                         0.0
```

Ostatak zaglavlja – izvršni program

```
unsigned char
               e ident[EI N
Elf32 Half
              e type;
Elf32 Half
               e machine;
Elf32 Word
               e version;
Elf32 Addr
               e entry;
Elf32 Off
               e phoff;
Elf32 Off
               e shoff;
Elf32 Word
               e flags;
Elf32 Half
               e ehsize;
Elf32 Half
               e phentsize;
Elf32 Half
               e phnum;
Elf32 Half
               e shentsize;
Elf32 Half
               e shnum;
Elf32 Half
               e shstrndx;
```

Name	Value	Meaning
ET_NONE	0	No file type
ET_REL	1	Relocatable file
ET_EXEC	2	Executable file
ET_DYN	3	Shared object file
ET_CORE	4	Core file
ET_LOPROC	0xff00	Processor-specific
ET_HIPROC	0xffff	Processor-specific

00000000	01	0 0 1	. 02	03	04	05	06	07	(80	09	0a	0b	0c	0d	0e	0f
00000000	7:	E 45	4c	46	01	01	01	00	(00	00	00	00	00	00	00	00
00000010	0:	2 00	03	00	01	00	00	00	0	00	82	04	80	34	00	00	00
00000020	2	4 04	00	00	00	00	00	00	3	34	00	20	00	05	00	28	00
00000030	1.	2 00	0f	00	06	00	00	00	3	34	00	00	00	34	80	04	08

unsigned char	e_ident[EI_N
Elf32_Half	e_type;
Elf32_Half	e_machine;
Elf32_Word	e_version;
Elf32_Addr	e_entry;
Elf32_Off	e_phoff;
Elf32_Off	e_shoff;
Elf32_Word	e_flags;
Elf32_Half	e_ehsize;
Elf32_Half	e_phentsize;
Elf32_Half	e_phnum;
Elf32_Half	e_shentsize;
Elf32_Half	e_shnum;
Elf32_Half	e_shstrndx;

Name	Value	Meaning
ET_NONE	0	No machine
EM_M32	1	AT&T WE 32100
EM_SPARC	2	SPARC
EM_386	3	Intel Architecture
EM_68K	4	Motorola 68000
EM_88K	5	Motorola 88000
EM_860	7	Intel 80860
EM_MIPS	8	MIPS RS3000 Big-Endian
EM_MIPS_RS4_BE	10	MIPS RS4000 Big-Endian
RESERVED	11-16	Reserved for future use

00000000	00	01	02	03	04	05	06	07	0	8	09	0a	0b	0c	0d	0e	0f
00000000	7f	45	4c	46	01	01	01	00	0	0	00	00	00	00	00	00	00
00000010	02	00	03	00	01	00	00	00	0	0	82	04	08	34	00	00	00
00000020	24	04	00	00	00	00	00	00	3	4	00	20	00	05	00	28	00
00000030	12	00	0f	00	06	00	00	00	3	4	00	00	00	34	80	04	08

```
unsigned char
               e ident[EI N
Elf32 Half
               e type;
Elf32 Half
               e machine;
Elf32 Word
               e version;
Elf32 Addr
               e entry;
Elf32 Off
               e phoff;
               e shoff;
Elf32 Off
Elf32 Word
               e flags;
Elf32 Half
               e ehsize;
Elf32 Half
               e phentsize;
Elf32 Half
               e phnum;
Elf32 Half
               e shentsize;
Elf32 Half
               e shnum;
Elf32 Half
               e shstrndx;
```

e version

Name	Value	Meaning
EV_NONE	0	Invalid versionn
EV_CURRENT	1	Current version

00000000	00	01	02	03	04	05	06	07		80	09	0a	0b	0с	0d	0e	0f
00000000	7f	45	4c	46	01	01	01	00		00	00	00	00	00	00	00	00
00000010	02	00	03	00	01	00	00	00		00	82	04	80	34	00	00	00
00000020	24	04	00	00	00	00	00	00	_	34	00	20	00	05	00	28	00
00000030	12	00	0f	00	06	00	00	00		34	00	00	00	34	80	04	80

```
unsigned char
               e ident[EI N
Elf32 Half
               e type;
Elf32 Half
               e machine;
Elf32 Word
               e version;
Elf32 Addr
               e entry;
Elf32 Off
               e phoff;
Elf32 Off
               e shoff;
Elf32 Word
               e flags;
Elf32 Half
               e ehsize;
Elf32 Half
               e phentsize;
Elf32 Half
               e phnum;
Elf32 Half
               e shentsize;
Elf32 Half
               e shnum;
Elf32 Half
               e shstrndx;
```

e_entry: virtuelna adresa ulazne tačke programa ili 0

00000000	00	01	02	03	04	05	06	07	80	09	0a	0b	0c	0d	0e	0f
00000000	7f	45	4c	46	01	01	01	00	00	00	00	00	00	00	00	00
00000010	02	00	03	00	01	00	00	00	00	82	04	08	34	00	00	00
00000020	24	04	00	00	00	00	00	00	34	00	20	00	05	00	28	00
00000030	12	00	0f	00	06	00	00	00	34	00	00	00	34	80	04	80

```
unsigned char
               e ident[EI N
Elf32 Half
               e type;
Elf32 Half
               e machine;
Elf32 Word
               e version;
Elf32 Addr
               e entry;
Elf32 Off
               e phoff;
Elf32 Off
               e shoff;
Elf32 Word
               e flags;
Elf32 Half
               e ehsize;
Elf32 Half
               e phentsize;
Elf32 Half
               e phnum;
Elf32 Half
               e shentsize;
Elf32 Half
               e shnum;
Elf32 Half
               e shstrndx;
```

e_phoff: ofset u fajlu (u bajtovima) do zaglavlja programa ili 0

00000000	00	01	02	03	04	05	06	07	08	3 09	0a	0b	0c	0 d	0e	0f
00000000	7f	45	4c	46	01	01	01	00	0(00	00	00	00	00	00	00
00000010	02	00	03	00	01	00	00	00	00	82	04	80	34	00	00	00
00000020	24	04	00	00	0.0	00	00	00	34	1 00	20	00	05	00	28	00
00000030	12	00	0f	00	06	00	00	00	34	1 00	00	00	34	80	04	80

```
unsigned char
               e ident[EI N
Elf32 Half
               e type;
Elf32 Half
               e machine;
Elf32 Word
               e version;
Elf32 Addr
               e entry;
Elf32 Off
               e phoff;
Elf32 Off
               e shoff;
Elf32 Word
               e flags;
Elf32 Half
               e ehsize;
Elf32 Half
               e phentsize;
Elf32 Half
               e phnum;
Elf32 Half
               e shentsize;
Elf32 Half
               e shnum;
Elf32 Half
               e shstrndx;
```

e_shoff: ofset u fajlu (u bajtovima) do tabele zaglavlja sekcija ili 0

00000000	00	01	02	03	04	05	06	07	80	09	0a	0b	0c	0d	0e	0f
00000000	7f	45	4c	46	01	01	01	00	00	00	00	00	00	00	00	00
00000010	02	00	03	00	01	00	00	00	00	82	04	08	34	00	00	00
00000020	24	04	00	00	00	00	00	00	34	00	20	00	05	00	28	00
00000030	12	00	0f	00	06	00	00	00	34	00	00	00	34	80	04	80

```
unsigned char
               e ident[EI N
Elf32 Half
               e type;
Elf32 Half
               e machine;
Elf32 Word
               e version;
                                   e_flags: flegovi specifični
Elf32 Addr
               e entry;
Elf32 Off
               e phoff;
                                   za konkretan procesor
               e shoff:
Elf32 Off
Elf32 Word
               e flags;
Elf32 Half
               e ehsize;
Elf32 Half
               e phentsize;
Elf32 Half
               e phnum;
Elf32 Half
               e shentsize;
Elf32 Half
               e shnum;
Elf32 Half
               e shstrndx;
```

00000000	00	01	02	03	04	05	06	07		80	09	0a	0b	0с	0d	0e	0f
00000000	7f	45	4c	46	01	01	01	00		00	00	00	00	00	00	00	00
00000010	02	00	03	00	01	00	00	00		00	82	04	08	34	00	00	00
00000020	24	04	00	00	0.0	00	00	00		34	00	20	00	05	00	28	00
00000030	12	00	0f	00	0.6	00	00	00	-	34	00	00	00	34	80	04	80

```
unsigned char
               e ident[EI N
Elf32 Half
               e type;
Elf32 Half
               e machine;
Elf32 Word
               e version;
                                   e ehsize: veličina ELF
Elf32 Addr
               e entry;
Elf32 Off
               e phoff;
                                   zaglavlja u bajtovima.
Elf32 Off
               e shoff;
Elf32 Word
               e flags;
Elf32 Half
               e ehsize;
Elf32 Half
               e phentsize;
Elf32 Half
               e phnum;
Elf32 Half
               e shentsize;
Elf32 Half
               e shnum;
Elf32 Half
               e shstrndx;
```

00000000	0.0	01	02	03	04	05	06	07	80	09	0a	0b	0c	0d	0e	0f
00000000	7 f	45	4c	46	01	01	01	00	00	00	00	00	00	00	00	00
00000010																
00000020	24	04	00	00	00	00	00	00	34	00	20	00	05	00	28	00
00000030	12	00	0f	00	06	00	00	00	34	00	00	00	34	80	04	80

```
unsigned char
               e ident[EI N
Elf32 Half
               e type;
Elf32 Half
               e machine;
Elf32 Word
               e version;
Elf32 Addr
               e entry;
Elf32 Off
               e phoff;
Elf32 Off
               e shoff;
Elf32 Word
               e flags;
Elf32 Half
               e ehsize;
Elf32 Half
               e phentsize;
Elf32 Half
               e phnum;
Elf32 Half
               e shentsize;
Elf32 Half
               e shnum;
Elf32 Half
               e shstrndx;
```

e_phentsize: veličina zaglavlja programa (jedan ulaz u tabeli zaglavlja programa).

00000000	00	01	02	03	04	05	06	07	80	09	0a	0b	0c	0 d	0e	0f
00000000	7 f	45	4c	46	01	01	01	00	00	00	00	00	00	00	00	00
00000010	02	00	03	00	01	00	00	00	00	82	04	80	34	00	00	00
00000020	24	04	00	00	00	00	00	00	34	00	20	00	05	00	28	00
00000030	12	00	0f	00	06	00	00	00	34	00	00	00	34	80	04	08

```
unsigned char
               e ident[EI N
Elf32 Half
               e type;
Elf32 Half
               e machine;
Elf32 Word
               e version;
Elf32 Addr
               e entry;
Elf32 Off
               e phoff;
Elf32 Off
               e shoff;
Elf32 Word
               e flags;
Elf32 Half
               e ehsize;
               e phentsize;
Elf32 Half
Elf32 Half
               e phnum;
Elf32 Half
               e shentsize;
Elf32 Half
               e shnum;
Elf32 Half
               e shstrndx;
```

e_phnum: broj ulaza u tabeli zaglavlja programa ili 0 ako tabela nije prisutna

00000000	00	01	02	03	04	05	06	07	80	09	0a	0b	0c	0d	0e	0f
00000000	7 f	45	4c	46	01	01	01	00	00	00	00	00	00	00	00	00
00000010	02	00	03	00	01	00	00	00	00	82	04	80	34	00	00	00
00000020	24	04	00	00	00	00	00	00	34	00	20	00	05	00	28	00
00000030	12	00	0f	00	06	00	00	00	34	00	00	00	34	80	04	80

```
unsigned char
               e ident[EI N
Elf32 Half
                e type;
Elf32 Half
                e machine;
Elf32 Word
                e version;
                                    e shentsize: veličina zaglavlja sekcije
Elf32 Addr
                e entry;
Elf32 Off
                e phoff;
                                    (jedan ulaz u tabeli zaglavlja sekcija)
Elf32 Off
                e shoff;
Elf32 Word
                e flags;
Elf32 Half
                e ehsize;
Elf32 Half
                e phentsize;
Elf32 Half
                e phnum;
Elf32 Half
               e shentsize;
Elf32 Half
                e shnum;
Elf32 Half
                e shstrndx;
```

00000000	0	0	01	02	03	04	05	06	07	80	09	0a	0b	0c	0 d	0e	0f
00000000	7	7f	45	4c	46	01	01	01	00	00	00	00	00	00	00	00	00
00000010																	
00000020	2	24	04	00	00	00	00	00	00	34	00	20	00	05	00	28	00
00000030	1	2	00	0f	00	06	00	00	00	34	00	00	00	34	80	04	08

```
unsigned char
               e ident[EI N
Elf32 Half
               e type;
Elf32 Half
               e machine;
Elf32 Word
               e version;
Elf32 Addr
               e entry;
Elf32 Off
               e phoff;
Elf32 Off
               e shoff;
Elf32 Word
               e flags;
Elf32 Half
               e ehsize;
Elf32 Half
               e phentsize;
Elf32 Half
               e phnum;
Elf32 Half
               e shentsize;
Elf32 Half
               e shnum;
Elf32 Half
               e shstrndx;
```

e_shnum: broj ulaza u tabeli zaglavlja sekcija ili 0 ako tabela nije prisutna

00000000	00	01	02	03	04	05	06	07	80	09	0a	0b	0c	0d	0e	0f
00000000	7 f	45	4c	46	01	01	01	00	00	00	00	00	00	00	00	00
00000010																
00000020	2.4	04	00	00	00	00	00	00	34	00	20	00	05	00	28	00
00000030	12	00	0f	00	06	00	00	00	34	00	00	00	34	80	04	80

```
unsigned char
               e ident[EI N
Elf32 Half
               e type;
Elf32 Half
               e machine;
Elf32 Word
               e version;
Elf32 Addr
               e entry;
Elf32 Off
               e phoff;
Elf32 Off
               e shoff;
Elf32 Word
               e flags;
Elf32 Half
               e ehsize;
Elf32 Half
               e phentsize;
Elf32 Half
               e phnum;
Elf32 Half
               e shentsize;
Elf32 Half
               e shnum;
Elf32 Half
               e shstrndx;
```

e_shstrndx: indeks ulaza u tabeli sekcija koji odgovara section name string table.

00000000	00	01	02	03	04	05	06	07	80	09	0a	0b	0c	0 d	0e	0f
00000000	7f	45	4c	46	01	01	01	00	00	00	00	00	00	00	00	00
00000010	02	00	03	00	01	00	00	00	00	82	04	08	34	00	00	00
00000020	24	04	00	00	0.0	00	00	00	34	00	20	00	05	00	28	00
00000030	12	00	0f	00	06	00	00	00	34	00	00	00	34	80	04	80

Ulaz tabele zaglavlja programa

```
typedef struct {
         Elf32 Word
                       p type;
         Elf32 Off
                       p offset;
                       p vaddr;
         Elf32 Addr
                       p paddr;
         Elf32 Addr
                       p filesz;
         Elf32 Word
         Elf32 Word
                       p memsz;
         Elf32 Word p flags;
         Elf32 Word
                       p align;
} Elf32 Phdr;
```

Elf32 Wo	md.		- m	0						Nan	ne				Value
Elf32_WO			typ off	set;				P	T_NU	ILL					0
Elf32 Ad			vad	-				P	T_LC)AD					1
Elf32_Ad	dr	p_	pad	dr;				P	T_DY	'NAM	IC				2
Elf32_Wo		p_:	fil	esz;				P	T_IN	TERI	₽				3
Elf32_Wo			mem					P	T_NC	TE					4
Elf32_Wo Elf32 Wo		p_:	rıa ali	_				P	T_SF	LIB					5
E1132_WO	Iu	P_(атт	911;				P	T_PF	IDR					6
								P	T_LC	PRO(C				0x70000000
00000030	12 0	0 Of	00	06 00	00	00	34	P	т_ні	PRO	C				0x7fffffff
00000040	34 8	0 04	80	a0 00	00	00	a0	υu	UU	uu	UĐ	υu	טט	υu	
00000050	04 0	00 00	00	03 00	00	00	d4	00	00	00	d4	80	04	80	
00000060	d4 8	0 04	08	13 00	00	00	13	00	00	00	04	00	00	00	
00000070	01 0	00 00	00	01 00	00	00	00	00	00	00	00	80	04	80	3
080000080	00 8	0 04	80	9c 02	00	00	9c	02	00	00	05	00	00	00	
00000090	00 1	.0 00	00	01 00	00	00	9c	02	00	00	9с	92	04	80	4
000000a0	9c 9	2 04	80	d2 00	00	00	d2	00	00	00	06	00	00		
00000000	00 1		00	02 00		00	9с	02	00	00	9c		04		5
00000000	9c 9		80	a0 00		00	a 0	00	00	00	06	00	00		
000000d0	04 0	00 00	00	2f 6c	69	62	2f	6c	64	2d	6c	69	6e	75	

```
Elf32 Word
              p type;
Elf32 Off
              p offset;
Elf32 Addr
              p vaddr;
Elf32 Addr
              p paddr;
              p filesz;
Elf32 Word
Elf32 Word
              p memsz;
Elf32 Word
              p flags;
Elf32 Word
              p align;
```

Ofset u bajtovima u odnosu na početak fajla do prvog bajta opisanog segmenta.

00000030	12	00	0f	00	06	00	00	00		34	00	00	00	34	80	04	80	4
00000040	34	80	04	80	a.0	00	00	00	ě	a.0	00	00	00	05	00	00	00	
00000050	04	00	00	00	03	00	00	00	(d4	00	00	00	d4	80	04	80	_
00000060	d4	80	04	08	13	00	00	00		13	00	00	00	04	00	00	00	2
00000070	01	00	00	00	01	00	00	00		00	00	00	00	00	80	04	80	2
08000000	00	80	04	08	9с	02	00	00	9	9c	02	00	00	05	00	00	00	-
00000090	00	10	00	00	01	00	00	00		9c	02	00	00	9c	92	04	80	- /
000000a0	9c	92	04	80	d2	00	00	00	(d2	00	00	00	06	00	00	00	-1
000000000	00	10	00	00	02	00	00	00		9c	02	00	00	9c	92	04	80	- -
000000c0	9c	92	04	80	a0	00	00	00	ě	a.0	00	00	00	06	00	00	00	5
000000d0	04	00	00	00	2f	6с	69	62	4	2f	6с	64	2d	6c	69	6е	75	
	1				_													

```
Elf32 Word
              p type;
Elf32 Off
              p offset;
Elf32 Addr
              p vaddr;
Elf32 Addr
              p paddr;
              p filesz;
Elf32 Word
Elf32 Word
              p memsz;
Elf32 Word
              p flags;
Elf32 Word
              p align;
```

Virtuelna adresa predviđena kao početak segmenta.

00000030	12 00	Of 00	06 0	00 00	00	34	00	00	00	34 80	04	80	a
00000040	34 80	04 08	a0 0	00 00	00	a0	00	00	00	05 00	00	00	1
00000050	04 00	00 00	03 0	00 00	00	d4	00	00	00	d4 80	04	80	_
00000060	d4 80	04 08	13 0	00 00	00	13	00	00	00	04 00	00	00	2
00000070	01 00	00 00	01 0	00 00	00	00	00	00	00	00 80	04	80	3
08000000	00 80	04 08	9c 0	02 00	00	9с	02	00	00	05 00	00	00	
00000090	00 10	00 00	01 0	00 00	00	9с	02	00	00	9c 92	04	80	4.
000000a0	9c 92	04 08	d2 0	00 00	00	d2	00	00	00	06 00	00	00	_
000000000	00 10	00 00	02 0	00 00	00	9с	02	00	00	9c 92	04	80	Ę
000000c0	9c 92	04 08	a0 0	00 00	00	a0	00	00	00	06 00	00	00	J
000000d0	04 00	00 00	2f 6	5c 69	62	2f	6с	64	2d	6c 69	6e	75	

```
Elf32 Word
              p type;
Elf32 Off
              p offset;
Elf32 Addr
              p vaddr;
Elf32 Addr
              p paddr;
Elf32 Word
              p filesz;
Elf32 Word
              p memsz;
Elf32 Word
              p flags;
Elf32 Word
              p align;
```

Fizička adresa predviđena kao početak segmenta (za sisteme u kojima to ima smisla).

1																	
4	80	04	80	34	00	00	00	34	00	00	00	06	00	0f	00	12	00000030
	00	00	00	05	00	00	00	a0	00	00	00	a 0	80	04	80	34	00000040
, _	80	04	80	d4	00	00	00	d4	00	00	00	03	00	00	00	04	00000050
2	00	00	00	04	00	00	00	13	00	00	00	13	80	04	80	d 4	00000060
3	80	04	80	00	00	00	00	00	00	00	00	01	00	00	00	01	00000070
	00	00	00	05	00	00	02	9c	00	00	02	9c	80	04	80	00	080000080
1	80	04	92	9с	00	00	02	9с	00	00	00	01	00	00	10	00	00000090
4	00	00	00	06	00	00	00	d2	00	00	00	d2	80	04	92	9c	000000a0
, 	80	04	92	9с	00	00	02	9с	00	00	00	02	00	00	10	00	000000000
5	00	00	00	06	00	00	00	a0	00	00	00	a0	80	04	92	9c	000000c0
j	75	бе	69	6с	2d	64	6с	2f	62	69	6c	2f	00	00	00	04	000000d0

```
Elf32 Word
              p type;
Elf32 Off
              p offset;
Elf32 Addr
              p vaddr;
              p_paddr;
Elf32 Addr
Elf32 Word
              p filesz;
Elf32 Word
              p memsz;
Elf32 Word
              p flags;
Elf32 Word
              p align;
```

Veličina segmenta u bajtovima unutar fajla. Može biti 0.

06 00 00 0	34 00 00 00 34 80 04 08	
8 a0 00 00 0	ao oo oo oo oo oo 1	
0 03 00 00 0	d4 00 00 00 d4 80 04 08	
8 13 00 00 0	<u> 13 00 00 00 04 00 00 00 2</u>	ı
0 01 00 00 0	00 00 00 00 00 80 04 08	
8 9c 02 00 0	9c 02 00 00 05 00 00 00	
0 01 00 00 0	9c 02 00 00 9c 92 04 08	
8 d2 00 00 0	d2 00 00 00 06 00 00 00 4	
0 02 00 00 0	9c 02 00 00 9c 92 04 08 📙	
8 a0 00 00 0	a0 00 00 00 06 00 00 00 5	l
0 2f 6c 69 6	2f 6c 64 2d 6c 69 6e 75	

```
Elf32 Word
              p type;
Elf32 Off
              p offset;
Elf32 Addr
              p vaddr;
Elf32 Addr
              p paddr;
Elf32 Word
              p filesz;
Elf32 Word
             p memsz;
Elf32 Word
              p flags;
Elf32 Word
              p align;
```

Veličina segmenta u bajtovima, kada se segment učita u radnu memoriju.

00000030	12 00	Of 00	06 00	00 00	34 00	00 00	34 80	04 08	
00000040	34 80	04 08	a0 00	00 00	a0 00	00 00	05 00	00 00 1	-
00000050	04 00	00 00	03 00	00 00	d4 00	00 00	d4 80	04 08	•
00000060	d4 80	04 08	13 00	00 00	13 00	00 00	04 00	00 00 2	3
00000070	01 00	00 00	01 00	00 00	00 00	00 00	00 80	04 08 3	2
08000000	00 80	04 08	9c 02	00 00	9c 02	00 00	05 00	00 00	,
00000090	00 10	00 00	01 00	00 00	9c 02	00 00	9c 92	04 08	
000000a0	9c 92	04 08	d2 00	00 00	d2 00	00 00	06 00	00 00 4	ľ
000000000	00 10	00 00	02 00	00 00	9c 02	00 00	9c 92	04 08	-
000000c0	9c 92	04 08	a0 00	00 00	a0 00	00 00	06 00	00 00 5)
000000d0	04 00	00 00	2f 6c	69 62	2f 6c	64 2d	6c 69	6e 75	

```
Elf32 Word
              p type;
Elf32 Off
              p offset;
Elf32 Addr
              p vaddr;
Elf32 Addr
              p paddr;
              p filesz;
Elf32 Word
Elf32 Word
              p memsz;
             p flags;
Elf32 Word
Elf32 Word
              p align;
```

Flegovi za segment.

Name	Value	Meaning
PF_X	0x1	Execute
PF_W	0x2	Write
PF_R	0x4	Read
PF_MASKPROC	0xf0000000	Unspecified

00000030	12	00	0f	00	06	00	00	00	34	00	00	00	34	80	04	80	
00000040	34	80	04	80	a0	00	00	00	a0	00	00	00	05	00	00	00	<u>]</u>
00000050	04	00	00	00	03	00	00	00	d4	00	00	00	d4	80	04	80	_
00000060	d4	80	04	80	13	00	00	00	13	00	00	00	04	00	00	00	
00000070	01	00	00	00	01	00	00	00	00	00	00	00	00	80	04	80	.3
08000000	00	80	04	08	9c	02	00	00	9c	02	00	00	05	00	00	00	
00000090	00	10	00	00	01	00	00	00	9c	02	00	00	9c	92	04	80	4
000000a0	9c	92	04	8.0	d2	00	00	00	d2	00	00	00	06	00	00	00	
000000р0	0.0	10	00	00	02	00	00	00	9с	02	00	00	9с	92	04	80	-
000000c0	9c	92	04	8 0	a0	00	00	00	a0	00	00	00	06	00	00	00] 5
000000d0	04	00	00	00	2f	6c	69	62	2f	6c	64	2d	6c	69	6e	75	

```
Elf32 Word
              p type;
Elf32 Off
              p offset;
Elf32 Addr
              p vaddr;
Elf32 Addr
              p paddr;
              p filesz;
Elf32 Word
Elf32 Word
              p memsz;
              p flags;
Elf32 Word
Elf32 Word
              p align;
```

Poravnanje za virtuelnu adresu i ofset u fajlu.

00000030	_12	00	0f	00	06	00	00	00	34	00	00	00	34	80	04	80	4
00000040	34	80	04	80	a 0	00	00	00	a.0	00	00	00	05	00	00	00	1
00000050	04	00	00	00	03	00	00	00	d4	00	00	00	d4	80	04	80	_
00000060	d 4	80	04	80	13	00	00	00	13	00	00	00	04	00	00	00	2
00000070	01	00	00	00	01	00	00	00	00	00	00	00	00	80	04	80	3
08000000	0.0	80	04	80	9c	02	00	00	9с	02	00	00	05	00	00	00	-
00000090	00	10	00	00	01	00	00	00	9с	02	00	00	9с	92	04	80	
000000a0	90	92	04	08	d2	00	00	00	d2	00	00	00	06	00	00	00	4
00000000	00	10	00	00	02	00	00	00	9с	02	00	00	9с	92	04	80	_
000000c0	90	92	04	80	a0	00	00	00	a0	00	00	00	06	00	00	00	5
000000d0	04	00	00	00	2f	6с	69	62	2f	6c	64	2d	6с	69	6e	75	

Sadržaj drugog segmenta (tipa PT_INTERP)

- Interpreter (dinamički povezivač) se učitava umesto programa i njegova je odgovornost da se u sistem učita korektna slika programa:
 - da učita segmente programa,
 - da po potrebi učita biblioteke sa dinamičkim vezivanjem i mapira ih u adresni prostor procesa,
 - da obezbedi povezivanje sa dinamičkom bibliotekom.

