RAM
(Random Access Memory)

STACK

I

&String
let s = &s1;
s

name	value
ptr	

String Reference

```
stack
FIXED SIZED VALUES
   ↓

   ↑

heap
GROWABLE VALUES

uninitialized data
bss
initialized data
STATIC VALUES
data

text
```

String
let s1 = String::from("hello world");
s1

name	value
ptr	
len	11
capacity	11

String

&str
let world = &s1[6..11];
world

name	value
ptr	
len	5

String Slice [HEAP]

UYARI: &s1[6..11] gibi string slicelar *char* offset değil *byte* offsettir. 2 byte'lık bir charda örneğin 'ç' harfinde slice alırsan hata verebilir.

II

&str
greeting

name	value
ptr	
len	3

// greeting: &'static str
let greeting = "Hi.";

String Literal [BINARY]

III
let bytes_arr : [u8; 4] = [240, 159, 145, 141]; // stack'ta
let thumbs_up = str::from_utf8(&bytes_arr).unwrap(); // stack'ta 👍

&str
s_thumbs_up

name	value
ptr	
len	3

String Slice [STACK]

[u8]
bytes_arr

index	value
0	240
1	159
2	145
3	141

[u8; N] bytes array [STACK]
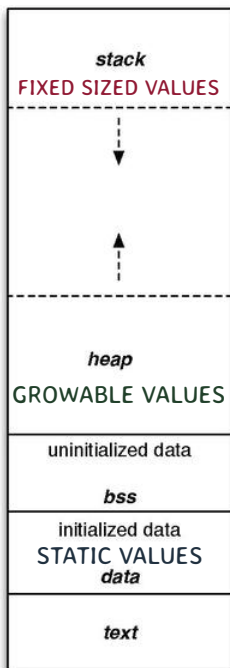
HEAP

index	value
0	h
1	e
2	l
3	l
4	o
5	
6	w
7	o
8	r
9	l
10	d

DATA

`data` segment of application binary

Program executable

index	value
0	H
1	i
2	.

&str point ettigi value 3 yerden birinde olabilir:

HEAP

BINARY(DATA)

STACK