Linguagens de Programação 1

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http://github.com/fsantanna-uerj/LP1

Vetores
Arrays
Strings

Vetores

```
int xs[4];
int ys[4];

printf("%p %p\n", &xs, &ys);

printf("%p %p %p %p %p %p\n",
        xs,xs+0,xs+1,xs+2,xs+3,xs+4);
```

endereço	id	valor
	xs	
	ys	
	...	

Vetores

```
int xs[4];
int ys[4];

*(xs+3) = 10; // xs[3]=10
printf("%d\n", xs[3]);

printf("%p %p\n", (xs+3), &xs[3]);
scanf("%d", &xs[1]);
```

endereço	id	valor
	xs	
	ys	
	...	

Arrays

- Vetor: array de dimensão 1
  - `int vs[2];`
- C também suporta arrays de múltiplas dimensões
  - `int vs[3][2];`
  - 3 linhas e 2 colunas

Arrays

```
int vs[3][2] = { {1,2},{3,4},{5,6} };
printf("%d %d\n", vs[0][1], vs[1][0]);
printf("%p %p\n", &vs, &vs[0][0]);
printf("%p\n",          &vs[0][1]);
printf("%p\n",          &vs[1][0]);
```

endereço	id	valor
	vs	

Exercícios 1 - 3

- No site:
- https://github.com/fsantanna-uerj/LP1/blob/master/Exercicios/lp1-06-vetores.md

Strings

```
char s1[] = “abc”;
char s2[] = “def”;

printf(“%s/%s\n”, s1, s2);

printf(“%d\n”, strlen(s1));

printf(“%d %d %d %d %d\n”,
        s1[0],s1[1],s1[2],s1[3],s1[4]);
```

endereço	id	valor
	s1	

Strings

```
char s1[] = “abc”;

char s2[4];
char s2[0] = ‘a’;
char s2[1] = ‘b’;
char s2[2] = ‘c’;
char s2[3] = ‘\0’; // 0

printf(“%s/%s\n”, s1, s2);
```

Exercícios 1 - 2

- No site:
- https://github.com/fsantanna-uerj/LP1/blob/master/Exercicios/lp1-06-strings.md