



CC50

O CURSO DE HARVARD. NO BRASIL.

& bitwise AND

| bitwise OR

^ bitwise XOR

~ ones complement

<< left shift

>> right shift

valgrind

```
valgrind -v -leak-check=full a.out
```

```
Invalid write of size 4
```

```
at 0x804840F: f (memory.c:23)
```

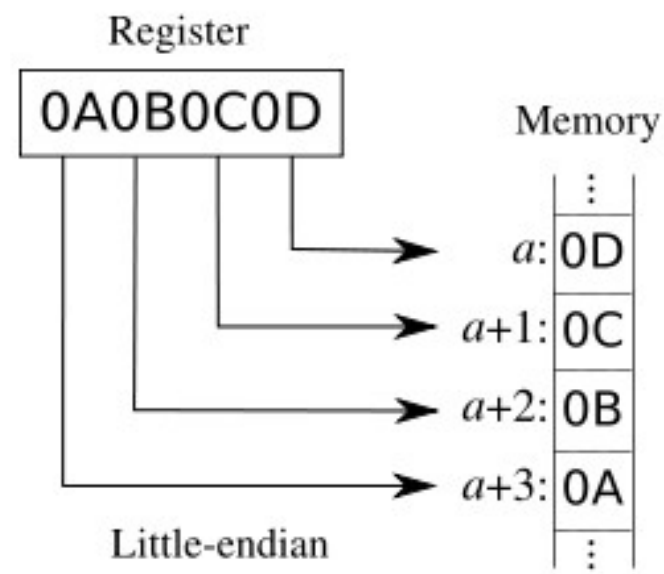
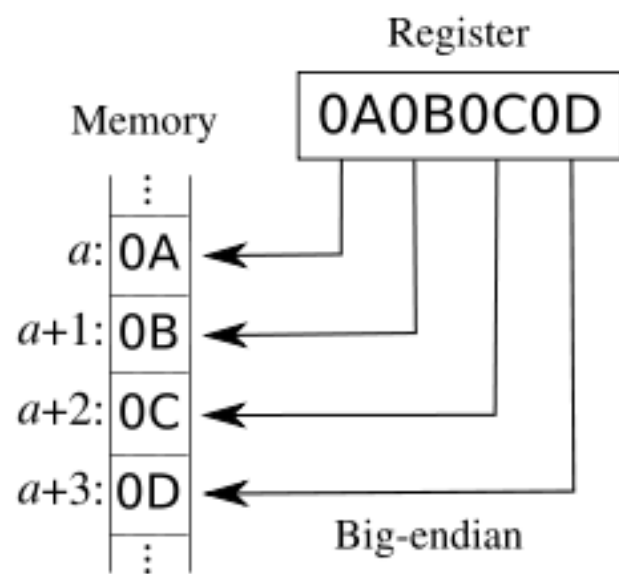
```
by 0x8048421: main (memory.c:30)
```

```
40 bytes in 1 blocks are definitely in loss record 1 of 1
```

```
at 0x4025BDC: malloc (vg_replace_malloc.c:195)
```

```
by 0x8048405: f (memory.c:22)
```

```
by 0x8048421: main (memory.c:30)
```





PLEASE
DO NOT
PLACE DISHWASHER
LOADS ON A TRAY
OR REMAINING
DISHES TO PREVENT
EQUIPMENT DAMAGE
THANKS FOR YOUR HELP

STAY AWAY
FROM THE
EQUIPMENT

```
typedef struct
{
    int números[CAPACIDADE];
    int tamanho;
    int topo;
} pilha;
```



```
typedef struct
{
    int números[CAPACIDADE];
    int tamanho;
    int começo;
} fila;
```


Pset 4

3	5	8	13
---	---	---	----

0

1

2

3

0	0	0	1	0	1	0	0
---	---	---	---	---	---	---	---

0

1

2

3

4

5

6

7

1	0	0	0	0	1	0	0
---	---	---	---	---	---	---	---

8

9

10

11

12

13

14

15

hash table

table[0]	
table[1]	
table[2]	
table[3]	
table[4]	
table[5]	
table[6]	
	⋮
table[24]	
table[25]	

1	0	0	1
---	---	---	---

Ana

Daniel

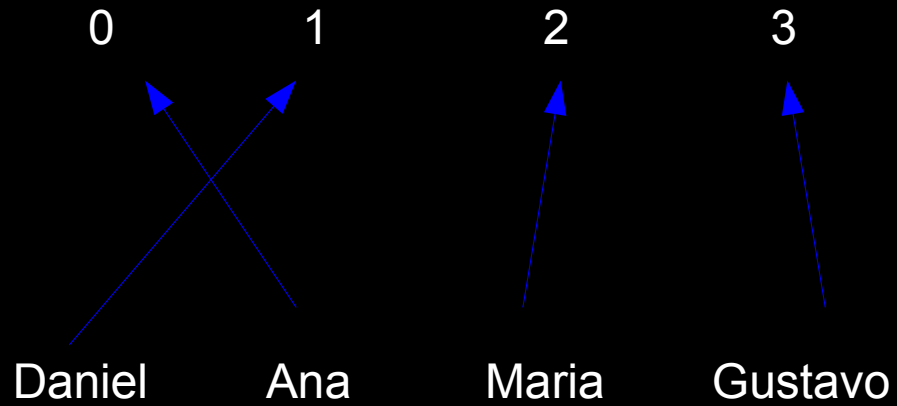
Maria

Gustavo

?

função hash

1	0	0	1
---	---	---	---

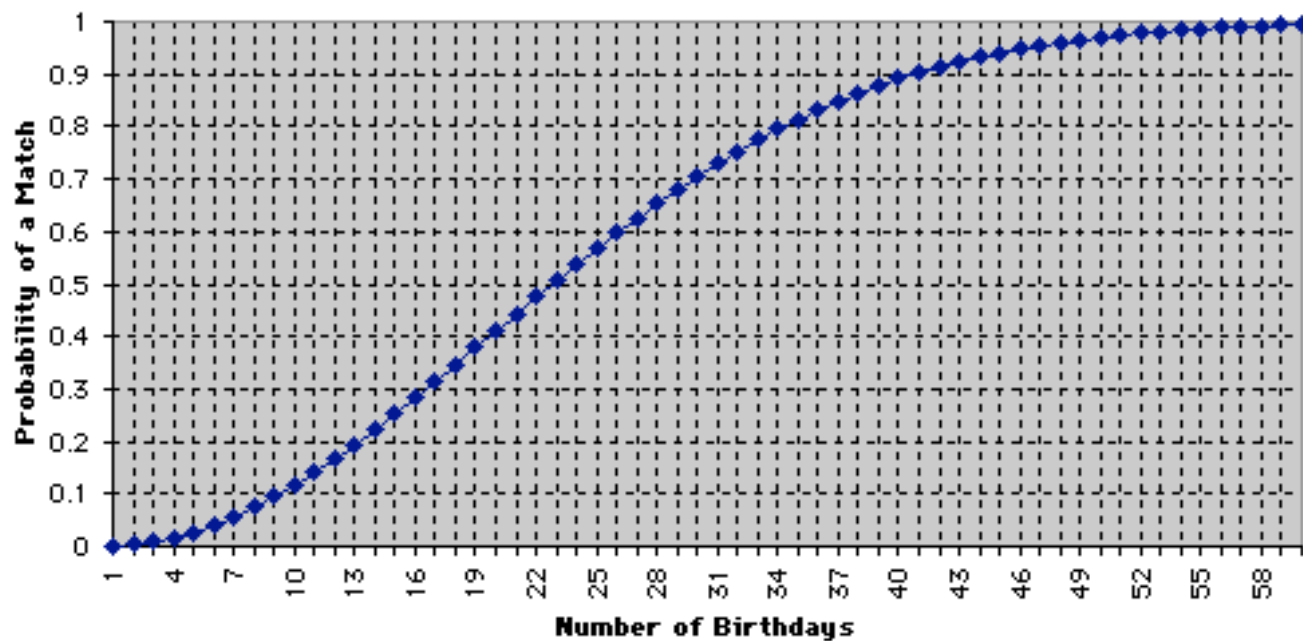


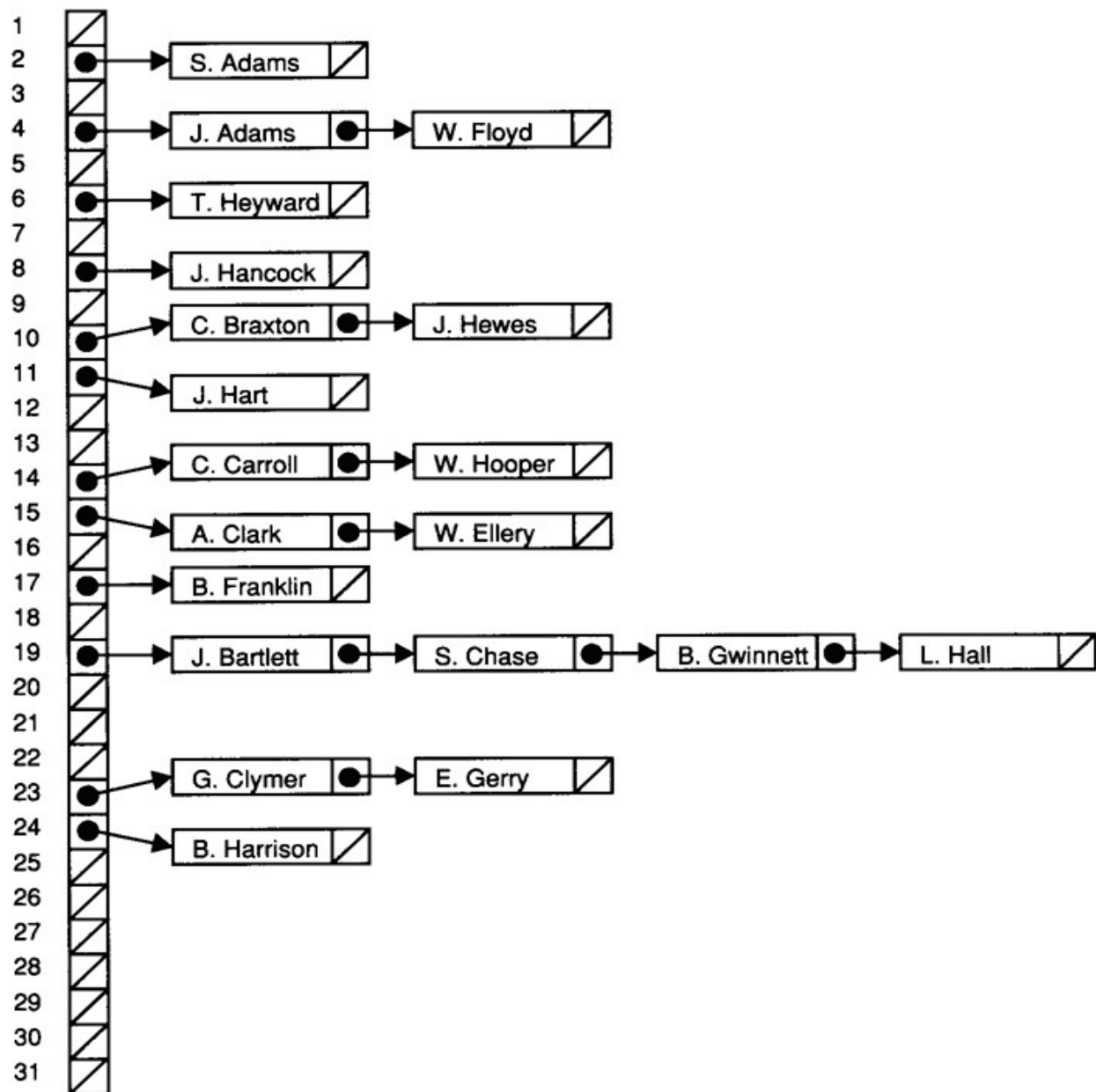
Em uma sala com n alunos do CC50,
qual é a probabilidade de que pelo menos 2
estudantes façam aniversário no mesmo dia?

$$\bar{p}(n) = 1 \cdot \left(1 - \frac{1}{365}\right) \cdot \left(1 - \frac{2}{365}\right) \cdots \left(1 - \frac{n-1}{365}\right)$$

$$= \frac{365!}{365^n(365 - n)!}$$

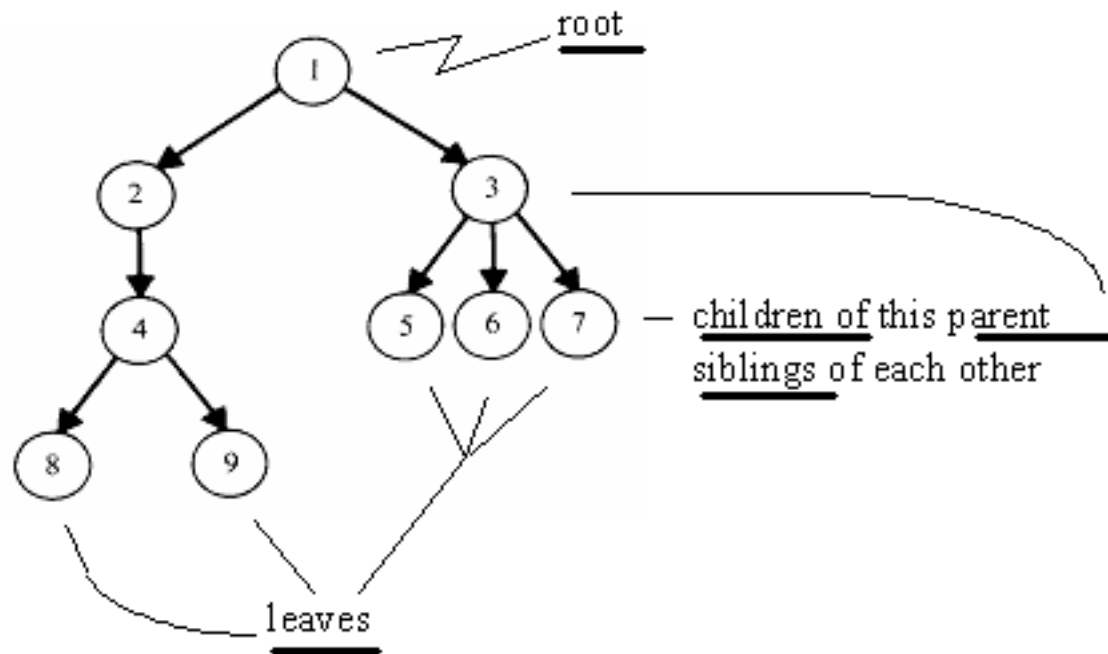
BIRTHDAYS ON THE SAME DAY



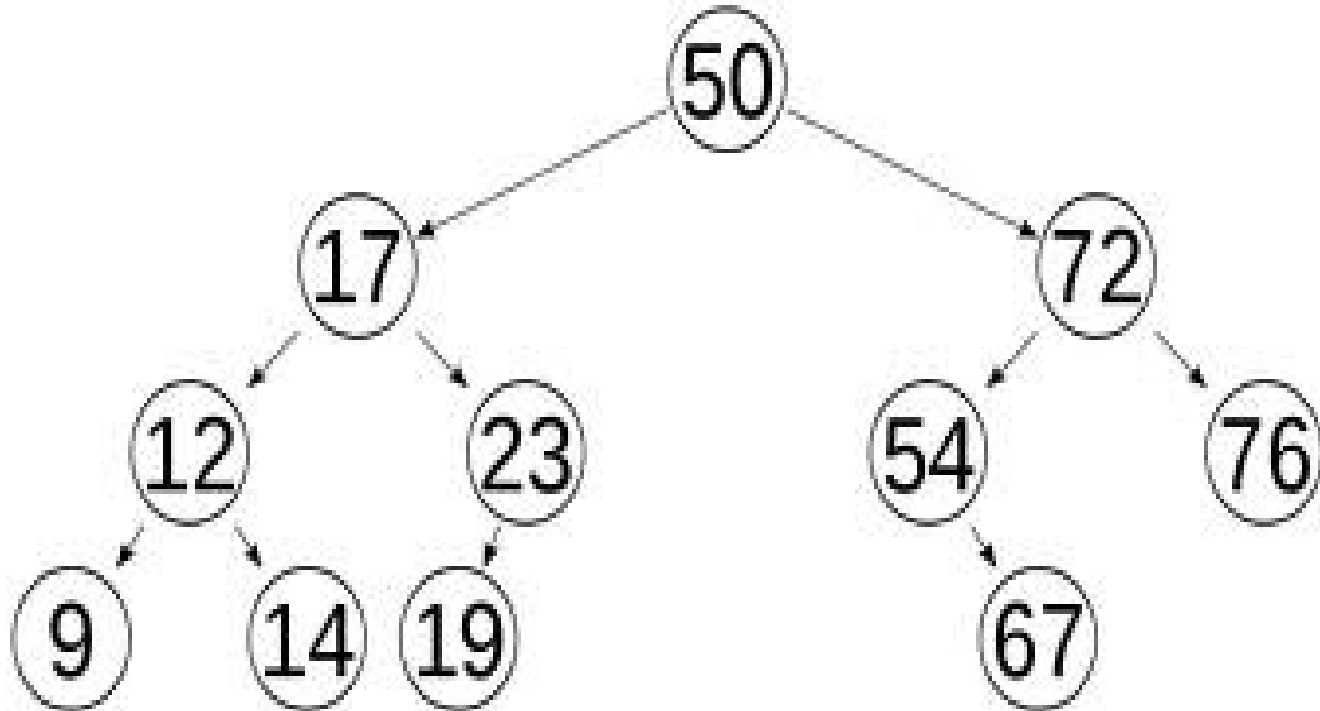


```
typedef struct node
{
    char palavra[TAMANHO + 1];
    struct node *próximo;
} node;
```

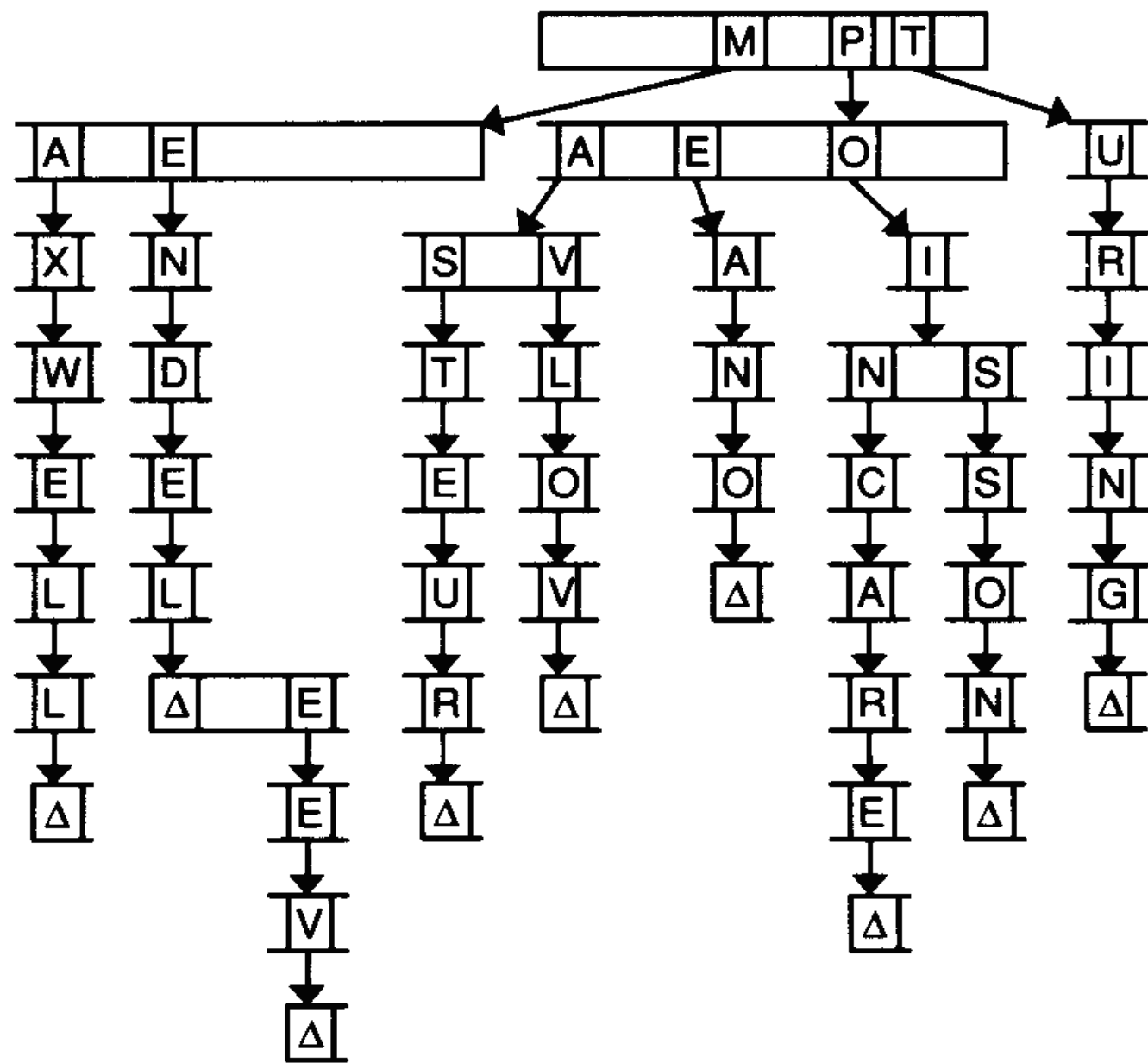
árvore



árvore de busca binária



```
typedef struct node
{
    int n;
    struct node *esquerda;
    struct node *direita;
} node;
```

```
typedef struct node
{
    bool fim;
    struct node *filhos[27];
} node;
```

BIG BOARD

to be continued...



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