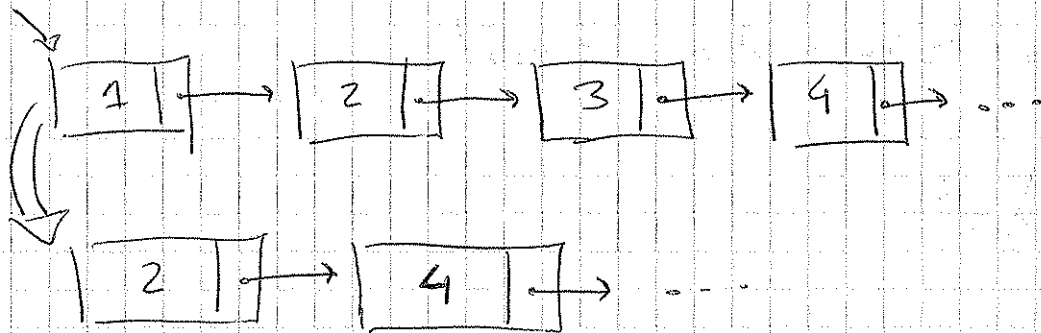


Funções de Orden Superior em C



listas.c

```

LInt aux = NULL;
LInt aplica_a_todos ( LInt l, int (*tr) (Int) ) {
    if (!l)
        return l;
    else
        {
            aux = (LInt) malloc (sizeof (LInt));
            aux->valor = (*tr) (l->valor);
            aux->seg = aplica_a_todos (l->seg, tr);
            return aux;
        }
}
    
```

prog.c

```

int dobro (int n) {
    return (2*n);
}

int main () {
    LInt l1 = NULL, l2 = NULL;
    l1 = constList (l1, 1);
    l2 = aplica_a_todos (l1, dobro);
    ...
}
    
```

```

LInt crop (LInt l, int inf, int sup) {
    LInt aux = NULL;
    if (!l || (l->valor > sup))
        return NULL;
    else
        if (l->valor < inf)
            return crop (l->seg, inf, sup);
        else
            ...
}
    
```

l1 → 7 → 13 → 15 → 18 → 22  
 l2 = crop (l1, 8, 18)  
 l2 → 13 → 15 → 18



```

aux = (List) malloc (sizeof (Node));
aux->valor = l->valor;
aux->seg = crop (l->seg, inf, sup);
return aux;

```

```

ArvBin crop (ArvBin a, int inf, int sup) {

```

A.P.C.

```

int containtenu (ArvBin a, int inf, int sup) {
if (!a)
return 0;
else {
if (a->valor < inf)
return containtenu (a->dir, inf, sup);
else
if (a->valor > sup)
return containtenu (a->esq, inf, sup);
else
return 1 + containtenu (a->esq, inf, sup) + containtenu (a->dir, inf, sup);
}
}

```