B-Tree-Split-Child(x, i)

```
 1   y = x.c_i                                // full node to split
 2   z = Allocate-Node()                      // z will take half of y
 3   z.leaf = y.leaf
 4   z.n = t - 1
 5   for j = 1 to t - 1                        // z gets y's greatest keys ...
 6       z.key_j = y.key_{j+t}
 7   if not y.leaf
 8       for j = 1 to t                        // ... and its corresponding children
 9           z.c_j = y.c_{j+t}
10   y.n = t - 1                               // y keeps t - 1 keys
11   for j = x.n + 1 downto i + 1              // shift x's children to the right ...
12       x.c_{j+1} = x.c_j
13   x.c_{i+1} = z                             // ... to make room for z as a child
14   for j = x.n downto i                      // shift the corresponding keys in x
15       x.key_{j+1} = x.key_j
16   x.key_i = y.key_t                         // insert y's median key
17   x.n = x.n + 1                             // x has gained a child
18   Disk-Write(y)
19   Disk-Write(z)
20   Disk-Write(x)
```