CFLCW2

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| --- | --- |
| Keywords | While + if + then + else + do + for + to + true + false + read + write + skip |
| Operators | ‘+’ + ’-‘ + ’\*’ + ’%’ + ’/’ + ’==’ + ’!=’ + ’>’ + ’<’ + ’:=’ + ’&&’ + ’||’ |
| Strings | “. . “ |
| LParen | ‘)’ |
| RParen | ‘(‘ |
| Semicolons | ‘;’ |
| Whitespace |  |
| Numbers |  |
| Digit | [0 - 9] |
| Begin | “{” |
| End | “}” |
| Identifiers |  |
| Sym | [a - z] |

|  |  |
| --- | --- |
| mkeps() | N/A |
| mkeps() | mkeps(r . ) |
| mkeps() | Empty |
| mkeps() | If (n == 0) Stars(Nil) else mkeps |
|  |  |
| inj(), c, \_ | If (c) inj(CHAR(c), c, v) else Empty |
| inj(), c, (v . Stars(vs)) | Stars(inj(r, c, v) :: vs) |
| inj(), c, Right(v) | inj(r, c, v) |
| inj(), c, Empty | Chr(c) |
| inj(), c, (v . Stars(vs)) | Stars(inj(r, c, v) :: vs) |



|  |  |
| --- | --- |
| Fib (Fig 1) | Nested Loop (Fig 2) |
| (k,write)  (str,"fib")  (s,;)  (k,read)  (i,n)  (s,;)  (i,minus1)  (o,:=)  (n,0)  (s,;)  (i,minus2)  (o,:=)  (n,1)  (s,;)  (k,while)  (i,n)  (o,>)  (n,0)  (k,do)  (b,{)  (i,temp)  (o,:=)  (i,minus2)  (s,;)  (i,minus2)  (o,:=)  (i,minus1)  (o,+)  (i,minus2)  (s,;)  (i,minus1)  (o,:=)  (i,temp)  (s,;)  (i,n)  (o,:=)  (i,n)  (o,-)  (n,1)  (b,})  (s,;)  (k,write)  (str,"result")  (s,;)  (k,write)  (i,minus2) | (i,start)  (o,:=)  (n,0)  (n,0)  (n,1000)  (s,;)  (i,x)  (o,:=)  (i,start)  (s,;)  (i,y)  (o,:=)  (i,start)  (s,;)  (i,z)  (o,:=)  (i,start)  (s,;)  (k,while)  (n,0)  (o,<)  (i,x)  (k,do)  (b,{)  (k,while)  (n,0)  (o,<)  (i,y)  (k,do)  (b,{)  (k,while)  (n,0)  (o,<)  (i,z)  (k,do)  (b,{)  (i,z)  (o,:=)  (i,z)  (o,-)  (n,1)  (b,})  (s,;)  (i,z)  (o,:=)  (i,start)  (s,;)  (i,y)  (o,:=)  (i,y)  (o,-)  (n,1)  (b,})  (s,;)  (i,y)  (o,:=)  (i,start)  (s,;)  (i,x)  (o,:=)  (i,x)  (o,-)  (n,1)  (b,}) |