

```

(defun preorder (tree)
  (cond
    ((null tree) nil)

    ((atom tree)
     (print tree))

    (t
     (print (car tree))
     (mapcar #'preorder (cdr tree))
     )
  )
)

(defun inorder (tree)
  (cond
    ((null tree) nil)

    ((atom tree)
     (print tree))

    (t
     (inorder (car (cdr tree)))
     (print (car tree))
     (mapcar #'inorder (cdr (cdr tree)))
     )
  )
)

(defun postorder (tree)
  (cond
    ((null tree) nil)

    ((atom tree)
     (print tree))

    (t
     (mapcar #'postorder (cdr tree))
     (print (car tree))
     )
  )
)

```

(preorder '(E (F (C) (J (K))) (B (D (G) (I)) (A (H))))) =>

**E
F
C
J
K
B
D
G
I
A
H**

(inorder '(E (F (C) (J (K))) (B (D (G) (I)) (A (H))))) =>

**C
F
K
J
E
G
D
I
B
H
A**

(postorder '(E (F (C) (J (K))) (B (D (G) (I)) (A (H))))) =>

**C
K
J
F
G
I
D
H
A
B
E**

```
22 | (t
23 |   (inorder (car (cdr tree)))
24 |   (print (car tree))
25 |   (mapcar #'inorder (cdr (cdr tree)))
26 | )
27 | )
28 | )
29 | )
30 | (defun postorder (tree)
31 |   (cond
32 |     ((null tree) nil)
33 |
34 |     ((atom tree)
35 |      (print tree))
36 |
37 |     (t
38 |      (mapcar #'postorder (cdr tree))
39 |      (print (car tree))
40 |      )
41 |   )
42 | )
43 | )
44 |
45 | ;(preorder '(E (F (C) (J (K))) (B (D (G) (I))) (A (H))))
46 | ;(inorder '(E (F (C) (J (K))) (B (D (G) (I))) (A (H))))
47 | (postorder '(E (F (C) (J (K))) (B (D (G) (I))) (A (H))))
48 |
```

Output:

C
K
J
F
G
I
D
H
A
B
E

HelloWorld.lsp 44akfv8gn

AI NEW COMMONLISP RUN

```
18 |
19 | ((atom tree)
20 |   (print tree))
21 |
22 | (t
23 |   (inorder (car (cdr tree)))
24 |   (print (car tree))
25 |   (mapcar #'inorder (cdr (cdr tree)))
26 | )
27 | )
28 | )
29 | )
30 | (defun postorder (tree)
31 |   (cond
32 |     ((null tree) nil)
33 |
34 |     ((atom tree)
35 |      (print tree))
36 |
37 |     (t
38 |      (mapcar #'postorder (cdr tree))
39 |      (print (car tree))
40 |      )
41 |   )
42 | )
43 | )
44 |
45 | ;(preorder '(E (F (C) (J (K))) (B (D (G) (I))) (A (H))))
46 | (inorder '(E (F (C) (J (K))) (B (D (G) (I))) (A (H))))
47 | ;(postorder '(E (F (C) (J (K))) (B (D (G) (I))) (A (H))))
```

STDIN

Output:

C
F
K
J
E
G
D
I
B
H
A

HelloWorld.lsp

44akfv8gn

AI

NEW

COMMONLISP

RUN

```

18
19 ((atom tree)
20   (print tree))
21
22 (t
23   (inorder (car (cdr tree)))
24   (print (car tree))
25   (mapcar #'inorder (cdr (cdr tree)))
26 )
27 )
28 )
29
30 (defun postorder (tree)
31   (cond
32     ((null tree) nil)
33
34     ((atom tree)
35      (print tree))
36
37     (t
38      (mapcar #'postorder (cdr tree))
39      (print (car tree))
40      )
41    )
42  )
43
44
45 (preorder '(E (F (C) (J (K))) (B (D (G) (I)) (A (H)))))
46 ;(inorder '(E (F (C) (J (K))) (B (D (G) (I)) (A (H)))))
47 ;(postorder '(E (F (C) (J (K))) (B (D (G) (I)) (A (H)))))
48

```

STDIN

Output:

E
F
C
J
K
B
D
G
I
A
H