EXPERIMENT – 14 Alpha-Beta Pruning (minimax with pruning)

AIM:

Optimize minimax with alpha-beta pruning.

CODE:

# alphabeta.py

def alphabeta(node,alpha=-1e9,beta=1e9, maximizing=True):

if isinstance(node,int): return node

if maximizing:

val=-1e9

for child in node:

val=max(val, alphabeta(child,alpha,beta,False))

alpha=max(alpha,val)

if beta<=alpha: break

return val

else:

val=1e9

for child in node:

val=min(val, alphabeta(child,alpha,beta,True))

beta=min(beta,val)

if beta<=alpha: break

return val

if \_\_name\_\_=='\_\_main\_\_':

tree=[[3,5,6],[2,[0,1],4],7]

print(alphabeta(tree))

OUTPUT:

