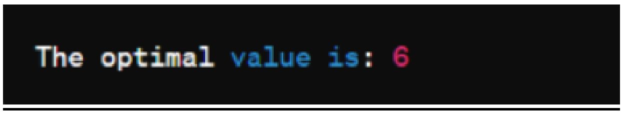
ALPHA-BETA PRUNING

PROGRAM:

```
MAX, MIN = 1000, -1000
def minimax(depth, nodeIndex, maximizingPlayer, values, alpha, beta):
if depth == 3:
return values[nodeIndex]
if maximizingPlayer:
best = MIN
for i in range(0, 2):
val = minimax(depth + 1, nodeIndex * 2 + i, False, values, alpha, beta)
best = max(best, val)
alpha = max(alpha, best)
if beta &lt;= alpha:
break
return best
else:
best = MAX
for i in range(0, 2):
val = minimax(depth + 1, nodeIndex * 2 + i, True, values, alpha, beta)
best = min(best, val)

beta = min(beta, best)
if beta &lt;= alpha:
break
return best
if __name__ == &quot;__main__&quot;:
values = [3, 5, 6, 9, 1, 2, 0, -1]
print(&quot;The optimal value is:&quot;, minimax(0, 0, True, values, MIN, MAX))
```

OUTPUT:



```
The optimal value is: 6
```