

ARTIFICIAL INTELLIGENCE LAB EXPERIMENTs

PROGRAM :

```
graph = {
    'A' : [('B', 12), ('C', 4)],
    'B' : [('D', 8), ('E', 7)],
    'C' : [('F', 6), ('G', 2)],
    'D' : [],
    'E' : [('H', 0)],
    'F' : [('H', 0)],
    'G' : [('H', 0)]
}
start = input("Enter the start state : ")
goal = input("Enter the goal state : ")
open = []
close = []

print("Path : ")
def bestFS(graph, start, goal, open, close):
    if start not in close:
        print(start)
        close.append(start)
        neighbour = graph[start]
        for i in neighbour:
            if i[0] not in open:
                open.append(i)
                open.sort(key=lambda i:i[1])
        if open[0][0] == goal:
            print(open[0][0])
        else:
            node=open[0]
            open.remove(node)
            bestFS(graph, node[0], goal, open, close)
bestFS(graph, start, goal, open, close)
```

OUTPUT :

```
Enter the start state : A
Enter the goal state : H
Path :
A
C
G
H
```