A* ALGORITHM

It is an algorithm that is similar to dijkstar's algorithm , it also works on the principle of minimal cost/value (known as relaxation).

The equation is as follows:-

F(n)=g(n)+h(n)

Where,

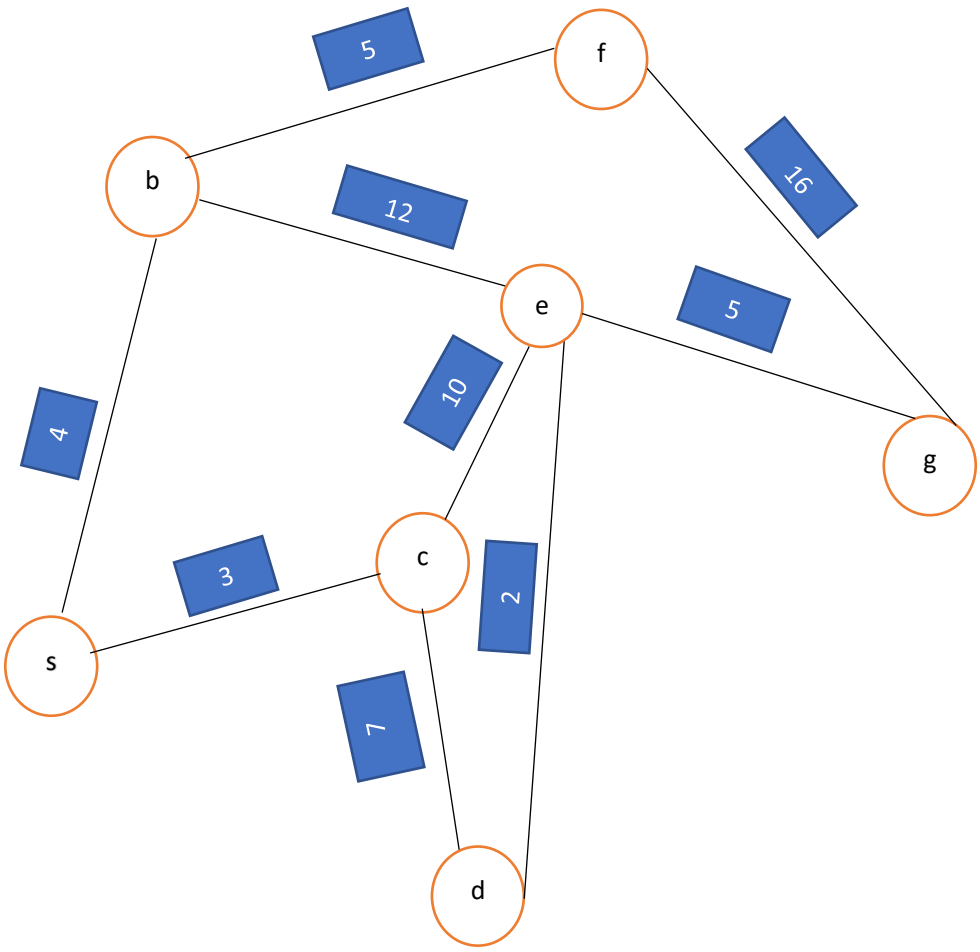
G(n) is the actual cost from initial node to nth node.

H(n) is the estimated cost from n to goal node.

1. It differs from the former that the value of the node is not initialized to infinity

2. Also the initial node is not set to zero,rather the goal node is set to zero.

Taking a question to understand the concept better



Values of the nodes are

S=14

B=12

C=11

D=6

E=4

F=11

G=0 (goal node)

For s->b

4+12=16

For s->c

3+11=15

As sc<sb we move from s to c

Sc->d or sc->e

3+10+4 3+7+6

=17 =16

Since scd<sce

So,we choose scd

Scd->e

3+7+2+4=16

Now taking scde->g

We get 3+7+2+5+0=17

We have now reached the goal node with minimum cost