**3.2. Greedy Best-First and A\* Search.**

An example (problem instance):

80

25

26

0

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42

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17

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i – Initial state/node g – Goal state/node

h- Heuristic function (Straight-line distance up to G)

Execution of Greedy Best-First Search

80

Step 1.

PQ: [node(i, 80)]

PP: [ ]

55

42

Step 2.

80

PQ: [node(b, 42), node(a, 55)]

PP: [i]

80

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Step 3.

PQ: [node(f, 17), node(e, 20), node(d, 25), node(a, 55)]

PP: [i, b]

55

42

80

25

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17

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Execution of A\* Search

80

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Step 1.

0, 80

PQ: [node(i, 0, nil, 80)]

PP: [ ]

Step 2.

PQ: [node(b, 2, 0, 87), node(a, 1, 0, 90)]

PP: [i]

0, 80

2, 87

1, 90

80

25

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0

55

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42

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Step 3.

PQ: [node(f, 6, 2, 89), node(a, 1, 0, 90), node(d, 4, 2, 98), node(e, 5, 2, 101), node(i, 3, 2, 170)]

PP: [i, b]

0, 80

2, 87

1, 90

5, 101

3, 170

6, 89

4, 98

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