50.021 Week 09: Planning

Planning Testing Results

prodigy-bw bw-simple

```
Heuristic: return 0
Goals:
        ('on-table', 'a')
        ('clear', 'b')
Running time: 0.0 s
Number of Actions: 2
Path:
        <Op (unstack a b)>
        <Op (put-down a)>
Final States:
        ('clear', 'a')
        ('on-table', 'b')
        ('on-table', 'a')
        ('clear', 'b')
        ('arm-empty',)
```

Heuristic: h_g (return unsatisfied goals count) Goals:

```
('on-table', 'a')
('clear', 'b')
```

Running time: 0.000999927520752 s

Number of Actions: 2

Path:

```
<Op (unstack a b)>
<Op (put-down a)>
```

```
('clear', 'a')
('on-table', 'b')
('on-table', 'a')
('clear', 'b')
('arm-empty',)
```

```
Heuristic: h_add
Goals:
        ('on-table', 'a')
        ('clear', 'b')
Running time: 0.00100016593933 s
Number of Actions: 2
Path:
        <Op (unstack a b)>
        <Op (put-down a)>
Final States:
        ('clear', 'a')
        ('on-table', 'b')
        ('on-table', 'a')
        ('clear', 'b')
```

('arm-empty',)

prodigy-bw bw-12step

```
Heuristic: return 0
```

(It took too long to run)

Heuristic: h_g (return unsatisfied goals count)

Goals: ('on', 'c', 'd') ('on-table', 'a') ('on', 'b', 'c') ('on', 'f', 'a')

Running time: 5.9279999733 s

Number of Actions: 12

Path: <Op (unstack c d)>

<Op (stack c a)>

<Op (unstack d e)>

<Op (put-down d)>

<Op (unstack c a)>

<Op (stack c d)>

<Op (pick-up b)>

<Op (stack b c)>

<Op (unstack e f)>

<Op (stack e b)>

<Op (unstack f g)>

<Op (stack f a)>

Final States:

('clear', 'g') ('on-table', 'd') ('on', 'e', 'b') ('arm-empty',)

('on-table', 'a') ('on', 'c', 'd') ('clear', 'e')

Heuristic: h_add

(It took too long to run)

painting p0

```
Heuristic: return 0
```

Goals:

```
('color-of', 'a', 'green')
('arm-empty',)
```

Running time: 0.00300002098083 s

Number of Actions: 3

Path:

```
<Op (pick-up b)>
<Op (spray b a green)>
<Op (stack b a)>
```

```
('on-table', 'a')
('arm-empty',)
('on-table', 'b')
('color-of', 'a', 'red')
('color-of', 'a', 'green')
('clear', 'a')
('color-of', 'b', 'green')
('clear', 'b')
```

Heuristic: h_g (return unsatisfied goals count)

```
Goals:
```

```
('color-of', 'a', 'green')
('arm-empty',)
```

Running time: 0.00100016593933 s

Number of Actions: 3

Path:

```
<Op (pick-up b)>
<Op (spray b a green)>
<Op (put-down b)>
```

```
('color-of', 'a', 'red')
('color-of', 'b', 'green')
('color-of', 'a', 'green')
('clear', 'b')
('on-table', 'a')
('arm-empty',)
('on', 'b', 'a')
```

```
Heuristic: h_add
Goals:
        ('color-of', 'a', 'green')
        ('arm-empty',)
Running time: 0.000999927520752 s
Number of Actions: 3
Path:
        <Op (pick-up b)>
        <Op (spray b a green)>
        <Op (stack b a)>
Final States:
        ('on-table', 'a')
        ('arm-empty',)
        ('on-table', 'b')
        ('color-of', 'a', 'red')
        ('color-of', 'a', 'green')
```

('clear', 'a')

('clear', 'b')

('color-of', 'b', 'green')

painting p1

```
Heuristic: return 0
Goals: ('on', 'a', 'b')
        ('color-of', 'b', 'green')
        ('arm-empty',)
Running time: 0.0150001049042 s
Number of Actions: 7
Path: <Op (unstack a b)>
        <Op (put-down a)>
        <Op (pick-up c)>
        <Op (spray c b green)>
        <Op (put-down c)>
        <Op (pick-up a)>
        <Op (stack a b)>
Final States:
        ('on', 'a', 'b')
        ('on-table', 'b')
        ('color-of', 'b', 'red')
        ('clear', 'c')
        ('clear', 'a')
        ('color-of', 'c', 'green')
        ('color-of', 'b', 'green')
        ('arm-empty',)
        ('color-of', 'a', 'red')
        ('on-table', 'c')
```

Heuristic: h_g (return unsatisfied goals count)

```
Goals:
```

```
('on', 'a', 'b')
('color-of', 'b', 'green')
('arm-empty',)
```

Running time: 0.00999999046326 s

Number of Actions: 7

Path:

```
<Op (unstack a b)>
<Op (put-down a)>
<Op (pick-up c)>
<Op (spray c b green)>
<Op (put-down c)>
<Op (pick-up a)>
<Op (stack a b)>
```

```
('on', 'a', 'b')
('on-table', 'b')
('color-of', 'b', 'red')
('clear', 'c')
('clear', 'a')
('color-of', 'c', 'green')
('arm-empty',)
('color-of', 'a', 'red')
('on-table', 'c')
```

```
Heuristic: h_add
Goals:
        ('on', 'a', 'b')
        ('color-of', 'b', 'green')
        ('arm-empty',)
Running time: 0.0310001373291 s
Number of Actions: 7
Path:
        <Op (unstack a b)>
        <Op (put-down a)>
        <Op (pick-up c)>
        <Op (spray c b green)>
        <Op (put-down c)>
        <Op (pick-up a)>
        <Op (stack a b)>
Final States:
        ('on', 'a', 'b')
        ('on-table', 'b')
        ('color-of', 'b', 'red')
        ('clear', 'c')
        ('clear', 'a')
        ('color-of', 'c', 'green')
        ('color-of', 'b', 'green')
        ('arm-empty',)
        ('color-of', 'a', 'red')
        ('on-table', 'c')
```