

# **ALGORITHM AND PROGRAMMING**



**Kamila Narendragharini**

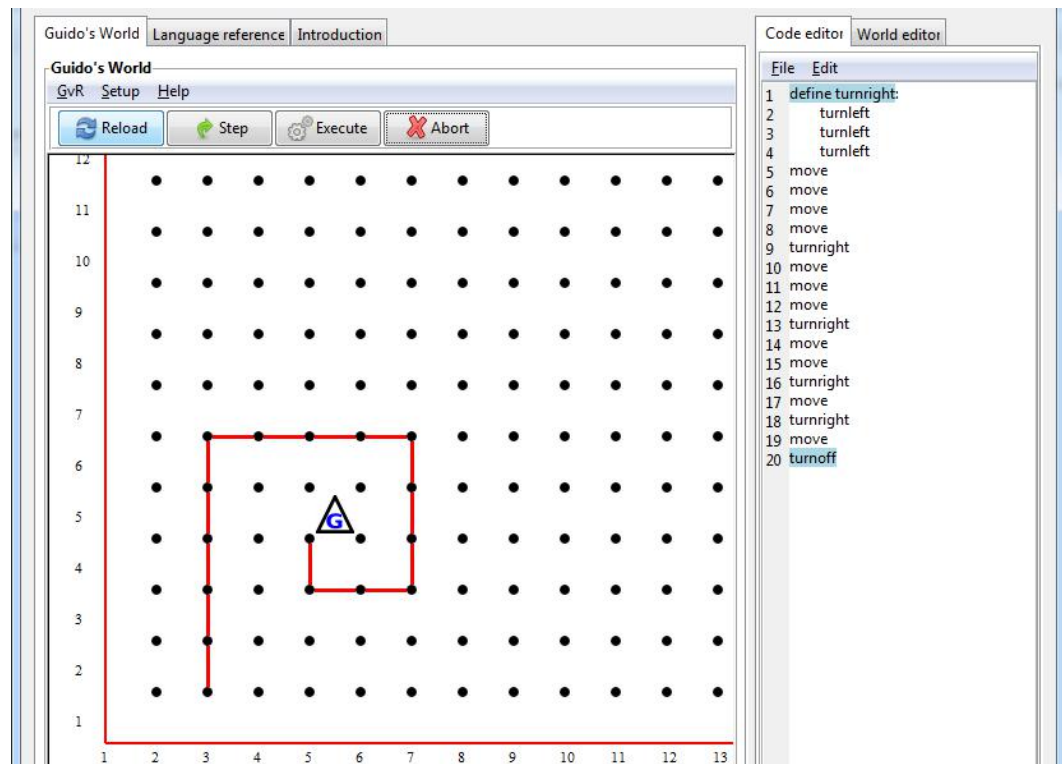
**L200194239**

**Informatics**

**Faculty of Communication and Informatics**

**Muhammadiyah University of Surakarta**

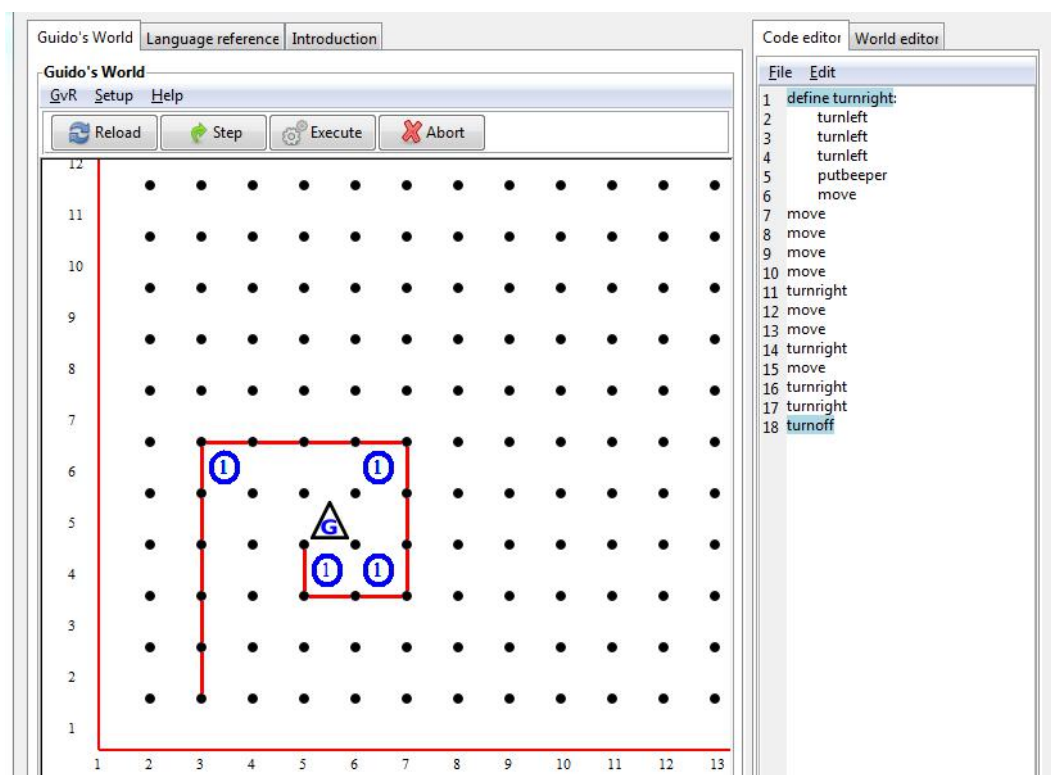
## Task 1.



Guido's World interface showing a 13x12 grid. A red path is drawn, starting at (1,1), going right to (7,1), up to (7,6), left to (3,6), down to (3,2), and right to (3,1). The robot is at (5,5). The code editor on the right shows the following commands:

```
1 define turnright:
2   turnleft
3   turnleft
4   turnleft
5 move
6 move
7 move
8 move
9 turnright
10 move
11 move
12 move
13 turnright
14 move
15 move
16 turnright
17 move
18 turnright
19 move
20 turnoff
```

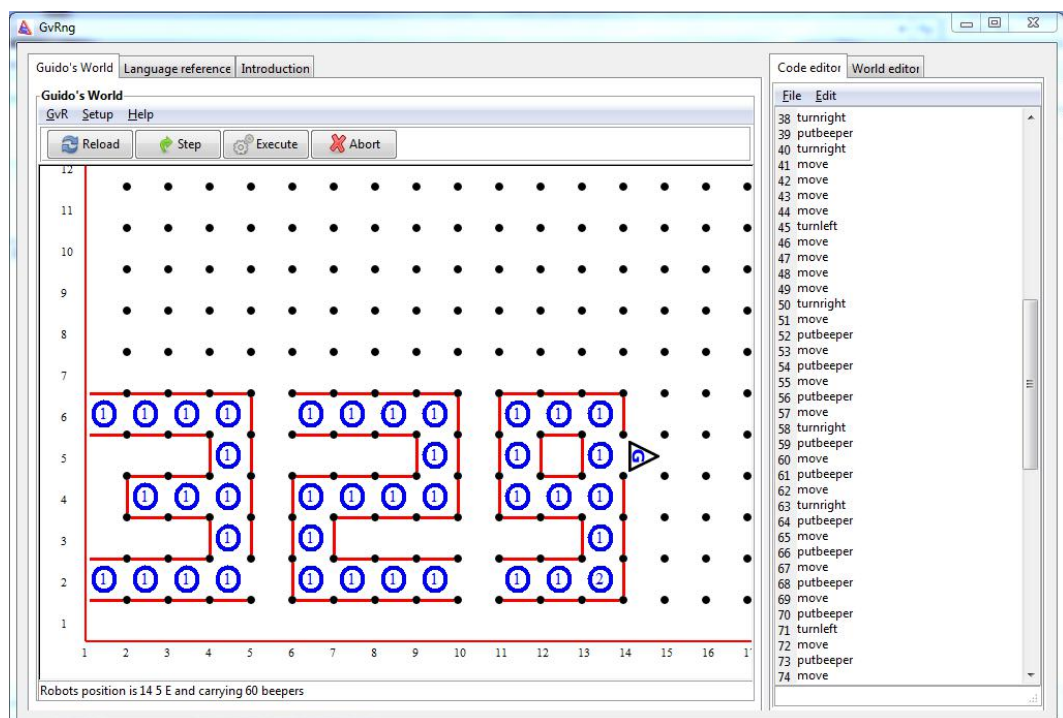
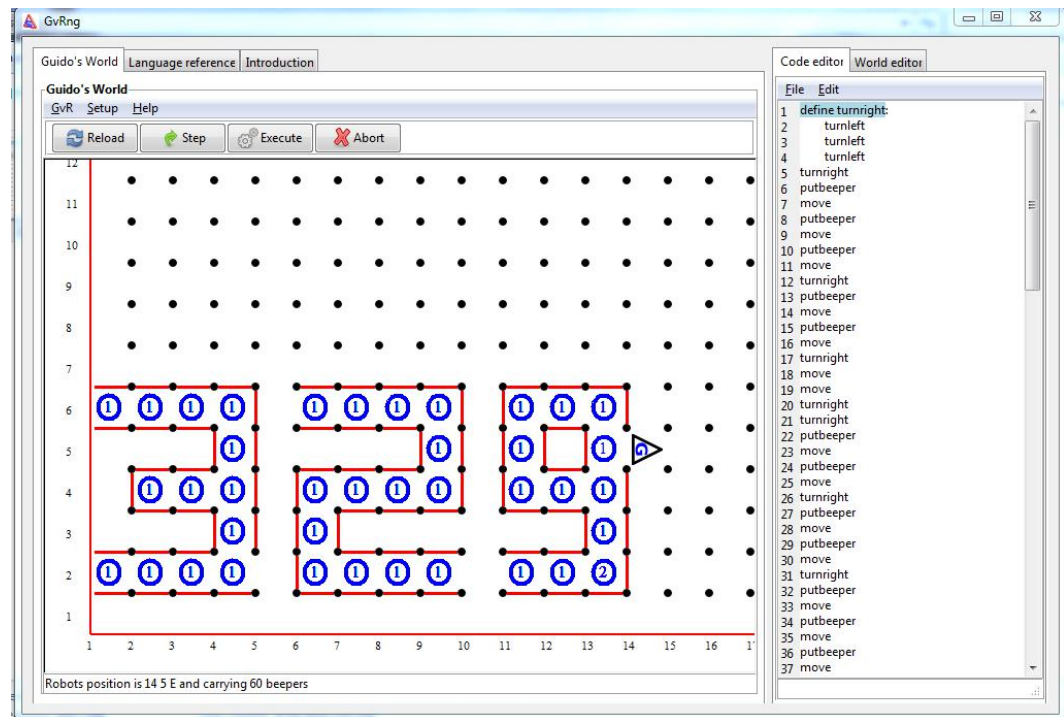
## Task 2



Guido's World interface showing a 13x12 grid. A red path is drawn, starting at (1,1), going right to (7,1), up to (7,6), left to (3,6), down to (3,2), and right to (3,1). The robot is at (5,5). The code editor on the right shows the following commands:

```
1 define turnright:
2   turnleft
3   turnleft
4   turnleft
5 putbeeper
6 move
7 move
8 move
9 move
10 move
11 turnright
12 move
13 move
14 turnright
15 move
16 turnright
17 turnright
18 turnoff
```

## Task 3





## Task 4

Guido's World

File Edit

Reload Step Execute Abort

Robots position is 15 5 E and carrying 12 beepers

Code editor World editor

```
1 define turnright:
2   turnleft
3   turnleft
4   turnleft
5 define gerakletak:
6   move
7   putbeeper
8 gerakletak
9 turnleft
10 gerakletak
11 move
12 turnright
13 gerakletak
14 gerakletak
15 move
16 turnright
17 move
18 putbeeper
19 gerakletak
20 move
21 turnright
22 gerakletak
23 gerakletak
24 move
25 turnleft
26 gerakletak
27 gerakletak
28 move
29 turnleft
30 gerakletak
31 gerakletak
32 move
33 turnleft
34 gerakletak
35 gerakletak
36 turnright
37 move
38 turnleft
39 move
40 move
41 move
42 turnright
43 gerakletak
44 move
45 turnleft
46 gerakletak
47 turnleft
```

Code editor World editor

File Edit

```
47 turnleft
48 turnleft
49 gerakletak
50 gerakletak
51 gerakletak
52 gerakletak
53 gerakletak
54 move
55 turnright
56 gerakletak
57 turnleft
58 turnleft
59 gerakletak
60 gerakletak
61 move
62 move
63 turnleft
64 gerakletak
65 turnleft
66 turnleft
67 move
68 turnleft
69 gerakletak
70 gerakletak
71 move
72 turnleft
73 gerakletak
74 gerakletak
75 gerakletak
76 turnleft
77 gerakletak
78 gerakletak
79 move
80 turnright
81 gerakletak
82 gerakletak
83 move
84 turnright
85 gerakletak
86 gerakletak
87 move
88 turnright
89 gerakletak
90 gerakletak
91 turnleft
92 move
```

## Task 5

Guido's World Language reference Introduction

Guido's World  
GvR Setup Help

Reload Step Execute Abort

Robots position is 4 2 S and carrying 0 beepers

Code editor World editor

File Edit

```

1 define gerakletak:
2   move
3   move
4   move
5   move
6   putbeeper
7   turnleft
8   turnleft
9   turnleft
10 define singkat:
11   gerakletak
12   gerakletak
13   gerakletak
14   gerakletak
15 move
16 singkat
17 turnleft
18 turnleft
19 move
20 turnoff

```

## Task 6

Guido's World Language reference Introduction

Guido's World  
GvR Setup Help

Reload Step Execute Abort

Robots position is 1 3 W and carrying 0 beepers

Code editor World editor

File Edit

```

1 define turnright:
2   turnleft
3   turnleft
4   turnleft
5 define gerakletak:
6   move
7   turnleft
8   move
9   putbeeper
10  turnleft
11  move
12  move
13 define oneway:
14  turnleft
15  move
16  move
17 define singkat:
18  gerakletak
19  oneway
20  gerakletak
21  oneway
22 move
23 singkat
24 gerakletak
25 turnleft
26 move
27 turnright
28 move
29 turnright
30 singkat
31 gerakletak
32 oneway
33 turnoff

```

