



THE OHIO STATE  
UNIVERSITY

# PROJECT 7: IMPLEMENTATION OF PROGRAM AND STATEMENT KERNELS

Daniil Gofman

Ansh Pachauri

SW 2: Dev & Dsgn

Paolo Bucci

Yiyang Chen

Shivam Gupta

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```
1 PROGRAM Test IS
2
3   INSTRUCTION one IS
4     move
5   END one
6
7   INSTRUCTION two IS
8     turnleft
9     turnleft
10  END two
11
12 BEGIN
13   WHILE true DO
14     two
15     one
16   END WHILE
17 END Test
18
```

```
1 PROGRAM BugTerminator IS
2 INSTRUCTION kill IS
3     IF next-is-not-friend THEN
4         infect
5     ELSE
6         IF next-is-wall THEN
7             turnright
8         ELSE
9             IF next-is-friend THEN
10                turnleft
11            ELSE
12                move
13            END IF
14        END IF
15    END IF
16 END kill
17
18 BEGIN
19     WHILE true DO
20
21     END WHILE
22 END BugTerminator
```

```
1 PROGRAM WeAreBorg IS
2     INSTRUCTION FindSpecies8472 IS
3         WHILE next-is-empty DO
4             infect
5         END WHILE
6     END FindSpecies8472
7
8 BEGIN
9     WHILE true DO
10         FindSpecies8472
11         IF next-is-wall THEN
12             turnleft
13         ELSE
14             move
15         END IF
16     END WHILE
17 END WeAreBorg
```

```
1 move
2 IF next-is-not-enemy THEN
3   turnleft
4 END IF
5 IF random THEN
6   infect
7 ELSE
8   skip
9 END IF
10 WHILE next-is-wall DO
11   turnright
12 END WHILE
13 turnback
14
```

```
1 IF next-is-enemy THEN
2   infect
3 END IF
4 move
5 turnright
6 turnright
7 move
8 WHILE next-is-wall DO
9   turnleft
10 END WHILE
11 IF random THEN
12   turnleft
13 ELSE
14   skip
15 END IF
16 turnback
17 IF next-is-not-enemy THEN
18   turnleft
19 END IF
```

```
1 IF random THEN
2   move
3   turnright
4   WHILE next-is-wall DO
5     IF next-is-not-enemy THEN
6       turnleft
7       WHILE next-is-not-empty DO
8         skip
9       END WHILE
10    END IF
11    turnleft
12  END WHILE
13  infect
14 ELSE
15   skip
16 END IF
17 move
18 WHILE next-is-wall DO
19   turnleft
20   IF random THEN
21     turnleft
22   ELSE
23     skip
24   END IF
25 END WHILE
26 turnback
27 IF next-is-not-enemy THEN
28   turnleft
29 END IF
30 IF next-is-enemy THEN
31   infect
32 END IF
33
34
```