

# NOC AI SMPS 2021

(Version 0.1)

PROGRESS( $S, a$ )

1 **return** ( $S \cup \text{effects}^+(a) \setminus \text{effects}^-(a)$ )

PUSHSET( $G, \text{stack}$ )

1 **push**  $G$  **to**  $\text{stack}$

2 **for each**  $\text{goal } g$  **in**  $G$

3     **push**  $g$  **to**  $\text{stack}$

4 **return**

GSP( $\text{givenState}, \text{givenGoal}, \text{actions}$ )

1  $\text{plan} \leftarrow$  **empty plan**

2  $\text{stack} \leftarrow$  **empty stack**

3  $S \leftarrow$   $\text{givenState}$

4 PUSHSET( $\text{givenGoal}, \text{stack}$ )

5 **while**  $\text{stack}$  **is not empty**

6      $X \leftarrow$  **pop**  $\text{stack}$

7     **if**  $X$  **is an action**  $a$

8          $\text{plan} \leftarrow \text{plan} \circ a$

9          $S \leftarrow$  PROGRESS( $S, a$ )

10    **else if**  $X$  **is a compound goal**  $G$ , **and**  $G$  **is not true in**  $S$

11         PUSHSET( $G, \text{stack}$ )

12    **else if**  $X$  **is a goal**  $g$ , **and**  $g$  **is not true in**  $S$

13          $a \leftarrow$  **choose relevant action that achieves**  $g$

14         **if**  $a$  **is null** **then return empty plan**

15         **push**  $a$  **to**  $\text{stack}$

16         PUSHSET( $\text{pre}(a), \text{stack}$ )

17 **return**  $\text{plan}$