

1. `<start>` -> require "ifj21" `<program>`
2. `<program>` -> `<fnc_dec>` `<program>`
3. `<program>` -> `<fnc_call>` `<program>`
4. `<program>` -> `<fnc_def>` `<program>`
5. `<program>` ->  $\epsilon$
6. `<fnc_dec>` -> global id\_fnc : function(`<params_dec>`) `<return_type>`
7. `<params_dec>` ->  $\epsilon$
8. `<params_dec>` -> `<data_type>` `<params_dec2>`
9. `<params_dec2>` ->  $\epsilon$
10. `<params_dec2>` -> , `<data_type>` `<params_dec2>`
11. `<return_type>` -> : `<data_type>`
12. `<return_type>` ->  $\epsilon$
13. `<data_type>` -> integer
14. `<data_type>` -> number
15. `<data_type>` -> string
16. `<fnc_call>` -> id\_fnc (`<value>`)
17. `<value>` ->  $\epsilon$
18. `<value>` -> `<value_last>` `<value2>`
19. `<value2>` -> , `<value_last>` `<value2>`
20. `<value2>` ->  $\epsilon$
21. `<value_last>` -> id\_var
22. `<value_last>` -> integer\_value
23. `<value_last>` -> number\_value
24. `<value_last>` -> string\_value
25. `<value_last>` -> nil
26. `<fnc_def>` -> `<fnc_head>` `<fnc_def2>` end
27. `<fnc_head>` -> function id\_fnc (`<params_def>`)
28. `<fnc_def2>` -> `<fnc_body>` `<return_void>`
29. `<fnc_def2>` -> : `<data_type>` `<fnc_body>` `<return>`
30. `<params_def>` ->  $\epsilon$
31. `<params_def>` -> `<var_def>` `<params_def2>`
32. `<params_def2>` ->  $\epsilon$
33. `<params_def2>` -> , `<var_def>` `<params_def2>`
34. `<var_def>` -> id\_var : `<data_type>`

35.  $\langle \text{return} \rangle \rightarrow \text{return } \langle \text{expr} \rangle$

36.  $\langle \text{return\_void} \rangle \rightarrow \text{return}$

37.  $\langle \text{return\_void} \rangle \rightarrow \epsilon$

38.  $\langle \text{fnc\_body} \rangle \rightarrow \langle \text{statement} \rangle \langle \text{fnc\_body} \rangle$

39.  $\langle \text{fnc\_body} \rangle \rightarrow \epsilon$

40.  $\langle \text{statement} \rangle \rightarrow \langle \text{var\_dec} \rangle$

41.  $\langle \text{statement} \rangle \rightarrow \text{id\_var} = \langle \text{var\_assign} \rangle$

42.  $\langle \text{statement} \rangle \rightarrow \langle \text{fnc\_call} \rangle$

43.  $\langle \text{statement} \rangle \rightarrow \langle \text{if} \rangle$

44.  $\langle \text{statement} \rangle \rightarrow \langle \text{loop} \rangle$

45.  $\langle \text{var\_dec} \rangle \rightarrow \text{local } \langle \text{var\_def} \rangle \langle \text{var\_dec\_init} \rangle$

46.  $\langle \text{var\_dec\_init} \rangle \rightarrow = \langle \text{var\_assign} \rangle$

47.  $\langle \text{var\_dec\_init} \rangle \rightarrow \epsilon$

48.  $\langle \text{var\_assign} \rangle \rightarrow \langle \text{expr} \rangle$

49.  $\langle \text{var\_assign} \rangle \rightarrow \langle \text{fnc\_call} \rangle$

50.  $\langle \text{if} \rangle \rightarrow \text{if } \langle \text{expr} \rangle \text{ then } \langle \text{statements} \rangle \text{ else } \langle \text{statements} \rangle \text{ end}$

51.  $\langle \text{loop} \rangle \rightarrow \text{while } \langle \text{expr} \rangle \text{ do } \langle \text{statements} \rangle \text{ end}$

52.  $\langle \text{statements} \rangle \rightarrow \epsilon$

53.  $\langle \text{statements} \rangle \rightarrow \langle \text{statement} \rangle \langle \text{statements} \rangle$

POZN.: Slova a znaky psaná černě jsou neterminály.

POZN.2: Znak mezery v pravidlech je irrelevantní a nic neznačí, slouží pouze k zpřehlednění.

POZN.3: Neterminál  $\langle \text{expr} \rangle$  není rozšířen a zpracuje ho analýza shora dolů.