



Iași, October 1<sup>st</sup>, 2022

## Pseudo-code language in a nutshell

1. assignment       $\langle variable \rangle \leftarrow \langle expression \rangle$

2. if

**if**  $\langle expression \rangle$  **then**  
     $\langle instruction_1 \rangle$   
**else**  
     $\langle instruction_2 \rangle$

**if**  $\langle expression \rangle$  **then**  
     $\langle instruction_1 \rangle$

3. while

**while**  $\langle expression \rangle$  **do**  
     $\langle instruction - sequence \rangle$

4. repeat

**repeat**  
     $\langle instruction - sequence \rangle$   
**until**  $\langle expression \rangle$ ;

5. for

**for**  $\langle variable \rangle \leftarrow \langle expression_1 \rangle$  **to**  $\langle expression_2 \rangle$  **do**  
     $\langle instruction - sequence \rangle$

**for**  $\langle variable \rangle \leftarrow \langle expression_1 \rangle$  **downto**  $\langle expression_2 \rangle$  **do**  
     $\langle instruction - sequence \rangle$

6. return      **return** [ $\langle expression \rangle$ ]

7. input      **read**  $\langle variable \rangle, \dots$

8. output      **print**  $\langle expression \rangle, \dots$

9. procedures

**procedure** *name (formal-parameter-list)*  
**begin**  
     $\langle instruction - sequence \rangle$   
**end**

**function** *name (formal-parameter-list)*  
**begin**  
     $\langle instruction - sequence \rangle$   
    **return**  $\langle expression \rangle$   
**end**

**call:**

*name(actual - parameter - list)*

the body of a **function** contains at least one  
**return**  $\langle expression \rangle$  instruction.