

Episode 01

Algorithms

European section, season 1

Plan

1 What's an algorithm

2 Example 1

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What's an algorithm

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- 1 the input, where data are entered ;
- 2 the process itself made of well-defined operations ;
- 3 the output, where the result of the algorithm is displayed.

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Changing the value of a variable

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We will use the notation $A \rightarrow 10$, as the use of $=$ can be misleading.

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Example 1

begin

```
1 → A ;  
A + 1 → B ;  
3 → A ;
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Values of the variables :

A	B
---	---

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begin

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A + 1 → B ;  
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Values of the variables :

Step #1

A	B
1	

Example 1

begin

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A + 1 → B ;  
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```

Values of the variables :

	A	B
Step #1	1	
Step #2	1	2

Example 1

begin

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Values of the variables :

	A	B
Step #1	1	
Step #2	1	2
Step #3	3	2

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begin

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Values of the variables :

	A	B
Step #1	1	
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Step #3	3	2

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Example 2

```
begin  
| Input :  $C$ , a whole number ;  
| if  $C = 1745$  then  
| | Output : "Correct code." ;  
| else  
| | Output : "Wrong code. Try again." ;
```

Example 2

```
begin  
| Input :  $C$ , a whole number ;  
| if  $C = 1745$  then  
| | Output : "Correct code." ;  
| else  
| | Output : "Wrong code. Try again." ;
```