# My Little Pascal

## 1. Specificarea

**letter** = "a" | "b" | "c" | "d" | "e" | "f" | … | "z";

**digit** = "0" | "1" | "2" | "3" | "4" | "5" | "6" | "7" | "8" | "9";

**identifier** = **letter**, { **letter**|**digit** };

**datatype** = "integer" | "real" | **identifier**;

**number**\_**literal** = ["+"|"-"], (**int\_literal** | **real\_literal**);

**int\_literal** = **digits**;

**real\_literal** = **digits**, [".", **digits** ];

**digits** = **digit**, {**digit**};

**arithm\_expr\_term** = **number\_literal** | **identifier** | ( "(", **arithm\_expr**, ")" );

**muldiv\_expr** = **arithm\_expr\_term**, { ("\*"|"/"|"div"|"mod"), **arithm\_expr\_term** };

**addsub\_expr** = **muldiv\_expr**, { ("+"|"-"), **muldiv\_expr** };

**arithm\_expr** = **addsub\_expr**;

**cond\_expr** = **arithm\_expr**, ("<"|"<="|">"|">="|"="|"<>"), **arithm\_expr**;

**vardecl\_block** = "var", **var\_declaration**, {";", **var\_declaration**};

**var\_declaration** = **identifier**, ":", **datatype**;

**instr\_block**  = "begin", [**instr**, {";", **instr**}], "end";

**instr** = **i\_attr** | **i\_cond** | **i\_while**;

**compound\_instr** = (**instr** | **instr\_block**);

**i\_attr** = **identifier**, ":=", **arithm\_expr**;

**i\_cond** = "if", "(", **cond\_expr**, ")", "then", **compound\_instr**,     ["else", **compound\_instr**];

**i\_while** = "while", **cond\_expr**, "do", (**instr** | **instr\_block**);

**i\_for** = "for", **identifier**, ":=", **int\_literal**, ["to"|"downto"],**int\_literal**,

"do", **compound\_instr**;

**program** = "program", **identifier**, [**vardecl\_block**], **instr\_block**, "end", ".";

# 2. Exemple surse

* calculeaza perimetrul si aria cercului de o raza data data

program cerc;  
var pi, r, p, a:real;  
begin  
 pi:=3.14;  
 readln(r);  
 p := 2 \* pi \* r;  
 a := pi \* r \* r;  
 writeln(p);

writeln(a)  
end.

* determina cmmdc a 2 nr naturale

program cmmdc;  
var a,b,r:integer;  
begin  
 readln(a,b);  
 while (b<>0) do  
 begin  
 r := a mod b;  
 a := b;  
 b := r;  
 end;  
 writeln(a)  
end.

* calculeaza suma a n numere citite de la tastatura

program sum;  
var n,i,x,s:integer;  
begin

s:=0;  
 readln(n);  
 for i:=1 to n do  
 begin  
 readln(x);  
 s:=s+x;  
 end;  
 writeln(s)  
end.

<https://web.archive.org/web/20210928043025/http://pascal-central.com/iso7185.html>

# 3. Surse care nu compileaza

* nici in MLP nici in limbajul original

program eroare1;  
var a,b:integer;  
begin  
 a:=2;  
 b:=3+(a:=a+1);  
end.

* compileaza in limbajul original, dar nu si in MLP

program eroare2;  
uses math; { MLP nu defineste unitati, nici comentarii >}  
var a,b:integer;  
begin  
 a:=-5; b:=2;  
 a:= min(a,b);  
end.