

Pascal for Newbies

I hereby donate this document to the public domain. I feel that it would do the most good there.

First notes: This file will cover syntax for Borland Turbo Pascal (TP) v5.5 and greater.

Code required to write a traditional first program:

Code:	What it does/purpose:
begin	States the beginning of the program's/unit's code
end.	States the end of the program's/unit's code note: "." after "end"
write(s : string)	States that you want to write a string of characters to a file, if no file is stated, then that string is written to the screen

Pascal is a wonderful language for the beginning programmer, the only better beginning language is BASIC, but BASIC is much less powerful than Pascal. Two major differences between BASIC and Pascal are that in BASIC you define your variables when they are used, in Pascal you have to define them before the beginning of the program code. Also, BASIC code is limited to what the writer of the BASIC compiler decided to have the compiler interpret. In Pascal you can write your own units (I'll post a file later) that let you do anything that Pascal can do, and if your Pascal compiler has an assembly language function (I know that TP 6.0 does) you can write units that can let you do anything that your system can do.

Now, for some stuff on how Pascal code is structured. The first thing that you need to know, and also the most commonly forgotten thing, is that a semi-colon ";" goes at the end of each line, except in special cases. These special cases would be the header for the section where variables are defined, "begin",
if [case] then
begin

etc. You will learn when you don't want a semi-colon just through writing code. About the end statement: end has a period at the end of it if it is at the end of your program, if it's at the end of a subroutine, it has a semi-colon after it, your compiler will yell at you if you get it wrong.

Now for some code...

```
program FirstProgram;
```

```
begin
  write('Hello, World!');
end.
```

That's a traditional first program. Now, of course if there's a write, then there has to be a read procedure, right? Well, there is, but it's only used when reading text from files, what's used to read a line entered by the user is the readln procedure. Here's a program that's somewhat interactive with the user...

```
program Namer;

var
  s : string;

begin
  writeln('Hello, I am an interactive program. ');
  writeln('My name is Yorcomputer, what's yours? ');
  readln(s);
  writeln('Hello, ', s, ', I'm pleased to meet you');
end.
```

Now that you understand how to state variables, we will delve into some of the variable types.

Type:	Range:
string	A string of up to 255 characters, can be stated for less (ex: s : string[35];
char	One character
byte	An integer 0 - 255
word	An integer 0 - 65535
shortint	An integer -128 - 127
integer	An integer -32768 - 32767
longint	An integer -2147483648 - 2147483647

Those were the basic variable types. There are others, but those will be in my next article.

That's about all I can give you to get started with Pascal. It should be enough to write simple but useful programs, look at your compiler errors to learn more.