

Vanhan ajan algoritmiohjelmointi

Algoritmikerho 30.3.2023

Ohjelmoinnin opetuskielet HY:llä

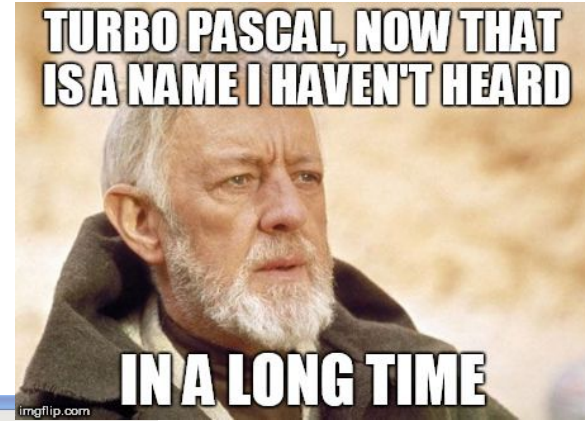
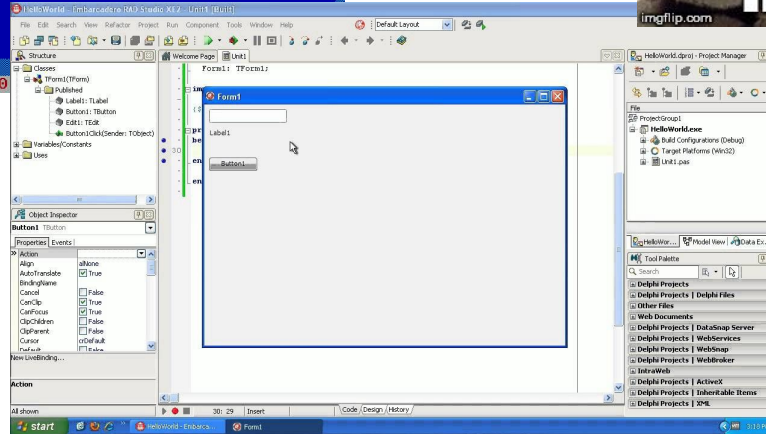
2020– Python

1997–2019 Java

???–1996 ???

Pascal

```
File Edit Search Run Compile Debug Tools Options Window Help
[+] SUM.PAS 1=[+]
Program Add;
Var
  Num1, Num2, Sum : Integer;
Begin
  Write('Input number 1: ');
  Readln(Num1);
  Write('Input number 2: ');
  Readln(Num2);
  Sum := Num1 + Num2;
  Writeln(Sum);
  Readln;
End.
```



Esimerkki 1: tulostus

```
program tulostus;  
begin  
    writeln('All your base are belong to us');  
end.
```

Esimerkki 2: summa

```
program summa;  
var  
    a, b, c: integer;  
begin  
    write('Anna luku 1: ');  
    read(a);  
    write('Anna luku 2: ');  
    read(b);  
    c := a+b;  
    writeln('Summa: ', c);  
end.
```

Esimerkki 3: vertailu

```
program vertailu;
var
  x : integer;
begin
  write('Anna luku: ');
  read(x);
  if x = 0 then
    writeln('nolla')
  else if x < 0 then
    writeln('negatiivinen')
  else
    writeln('positiivinen');
end.
```

Esimerkki 4: mysteeri

```
program mysteeri;  
var  
    x : integer;  
begin  
    write('Anna luku: ');  
    read(x);  
    if x = 42 then  
        begin  
            writeln('apina');  
            writeln('banaani');  
            writeln('cembalo');  
        end;  
    end;  
end.
```

Esimerkki 5: for-silmukka

```
program silmukka1;  
var  
    i : integer;  
begin  
    for i := 1 to 100 do  
        begin  
            write(i, ' ');  
        end;  
        writeln;  
    end.  
end.
```


Esimerkki 6: while-silmukka

```
program silmukka2;  
var  
  x : integer;  
begin  
  write('Anna luku: ');  
  read(x);  
  while x > 0 do  
  begin  
    write(x, ' ');  
    x := x-1;  
  end;  
  writeln;  
end.
```

Esimerkki 7: taulukko

```
program taulukko;  
var  
  data : array[1..10] of integer;  
  i : integer;  
begin  
  for i := 1 to 10 do  
    begin  
      data[i] := i*i;  
    end;  
  writeln(data[5]);  
end.
```

Esimerkki 8: proseduuri

```
program proseduuri;  
  
  procedure toisto(c : integer);  
  var  
    i : integer;  
  begin  
    for i := 1 to c do writeln('lol');  
  end;  
  
  begin  
    toisto(5);  
  end.
```

Esimerkki 9: funktio

```
program funktio;
```

```
function pienin(a, b : integer) : integer;  
begin  
    if a < b then pienin := a  
    else pienin := b;  
end;
```

```
begin  
    writeln(pienin(3,5));  
end.
```

Python vs. Pascal

Python

```
x = []  
x.append(5)  
x.append(2)  
x.append(8)  
x.append(3)  
x.sort()  
print(x) # [2, 3, 5, 8]
```

Pascal

???