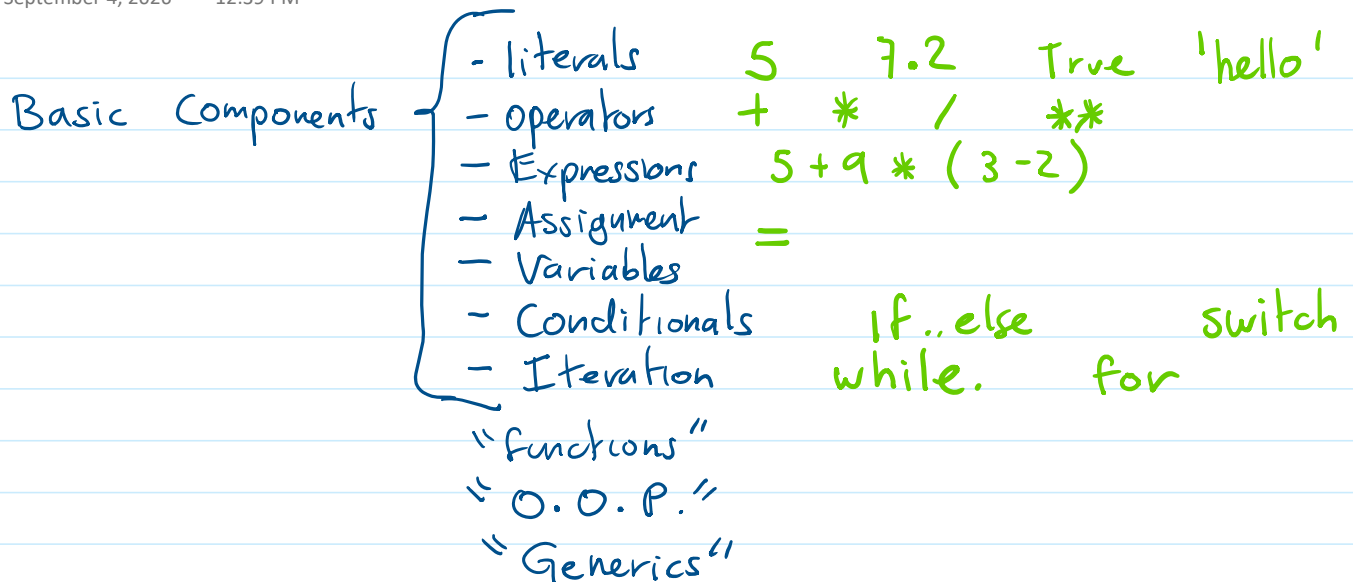


3 The "Puck" 26.3 Programming Language

Friday, September 4, 2026

12:39 PM



THE "PUCK" 26.3 PROGRAMMING LANGUAGE

```
% This is a comment
FOO main ( )
  PRINT ( "Hello" , "World" ) .
  x ← 2 + 2 .
  y ← 3 * 12 / 7.5 .
  p ← ( x > 0 ) AND ~ ( y <= 30 ) .
  PRINT ( x * 100 ) .
END.
```

- % like comments.
- Keywords are UPPERCASE
- Space Separation.
- FOO Function declaration
- ← Assignment.
- Literals
- Operators AND
~ negation.
- Terminator.

C

```
a = b;
printf (~);
a = a + 1;
Terminator
```

Pascal

```
a := b;
print (~);
a := a + 1;
Separators
```

Go

```
a := b;
print (~);
a := a + 1 ; b = b + 1;
```

```
% FizzBuzz
FOO FizzBuzz ( n )
  IF n MOD 3 = 0 ;
  IF n MOD 5 # 0 :
```

- Parameters
- IF ELSE; ELIF FI

```

FOO FizzBuzz ( n )
  IF n MOD 3 = 0 ;
    IF n MOD 5 # 0 ;
      PRINT ( "Fizz" ) .
    ELSE;
      PRINT ( "FizzBuzz" ) .
    FI
  ELSE;
    IF n MOD 5 = 0 ;
      PRINT ( "Buzz" ) .
    FI
  FI
END.

```

- Parameters
- IF ELSE; ELIF FI
- MOD DIV integer division
- = equals
- # not equals
- ;

% Functions and Loops

```

FOO fibonacci ( n )
  x <- 1 .   y <- 0 .   z <- 3 .
  LOOP z < n ;
    x <- x + y .
    y <- x - y .
    z <- z + 1 .
  POOL
  RETURN ( x ) .
END.

```

- indentation not important
- LOOP
- RETURN

n=5

x	1	1	2	3	5	8	13
y	0	1	1	2	3	5	8
z	3						

% Greatest Common Denominator

```

FOO gcd ( a , b )

  LOOP a > b ;
    a <- a - b .
  ELIF b > a ;
    b <- b - a .
  POOL
  % postcondition a = b
  RETURN ( a )

END.

```

- LOOP has an ELIF

```

LOOP cond
  ≡
ELIF cond
  ≡
ELIF cond
  ≡
POOL

```

Conditions are tested sequentially until one is true.

% Newlines are just whitespace

```
FOO foo ( s )  
  res <- True .  
  IF ( s = "A" ) OR  
    ( s = "B" ) OR ( s = "C" )  
    ;  
    PRINT (   
      "Hello" & "World"  
    ) .  
  FI  END.
```

• & Concatenation.

