EXAMPLE OF PROGRAMS

```
# p1: compute the min of 3 numbers


PROGRAM
	MAIN -> {
		DECLARATIONS
			INTEGER: nr_1, nr_2, nr_3, min;
			STRING: output_message <- "The minimum of the 3 numbers is: ";
		STATEMENTS
		{
			in>>nr_1, nr_2, nr_3;
			if (nr_1 < nr_2)
				min <- nr_1;
			else
				min <- nr_2;
			if (nr_3 < min)
				min <- nr_3;
			out<<output_message, min;
		}
	}



###
	p1err: identifiers can not start with a number -> identifier 1_nr lexical error;
		a string needs to be placed between "", output_message misses the closing "
###

PROGRAM
```

```
MAIN -> {
        DECLARATIONS
                INTEGER: 1_nr, nr_2, nr_3, min;
                STRING: output_message <- "The minimum of the 3 numbers is: ;
        STATEMENTS
        {
                in>>nr_1, nr_2, nr_3;
                if (nr_1 < nr_2)
                        min <- nr_1;
                else
                        min <- nr_2;
                if (nr_3 < min)
                        min <- nr_3;
                out<<output_message, min;
        }
}
```

p2: verify if a number is prime

```
PROGRAM
        MAIN -> {
                DECLARATIONS
                        INTEGER: input_number, i;
                        BOOLEAN: prime <- true;
                STATEMENTS
                {
                        in("Give a number: ")>>input_number;
```

```
                for(i <- 2; i <= input_number / 2; i <- i+1)
                        if (input_number % i == 0)
                                prime <- false;
                if (prime == true)
                        out<<"The number ", input_number, " is prime";
                else
                        out<<"The number ", input_number, " is not prime";
        }
}
```

p3: compute the average of the strictly positive integers from an array with n integers (n<=100);

```
PROGRAM
    MAIN -> {
        DECLARATIONS
            INTEGER: n, i, nr, sum <- 0, positive_integers <- 0;
            INTEGER CONST: MAX_ARRAY_SIZE <- 100;
            ARRAY[INTEGER]: a[MAX_ARRAY_SIZE];
        STATEMENTS
        {
            in("Give the size of the array:")>>n;
            for (i <- 0; i < n; i <- i+1)
            {
                in>>nr;
                a[i] <- nr;
            }
            for (i <- 0; i < n; i <- i+1)
```

```
                {
                        if(a[i] > 0)
                        {
                                sum <- sum + a[i];
                                positive_integers <- positive_integers + 1;
                        }
                }

                if (positive_integers == 0)
                        out<<"There is no positive integer in the array";
                else
                        out<<"The average of the positive integers is: ",
sum/positive_integers;
        }
    }
```