

Lab 3

Minimal BASIC Interpreter

due on 2013-12-02

BASIC

- developed in the mid-1960s
- Dartmouth College
- John Kemeny and Thomas Kurtz.

A Plus B

```
10  REM Program to add two numbers
20  INPUT n1
30  INPUT n2
40  LET total = n1 + n2
50  PRINT total
60  END
```

A Plus B -> Add 3 Numbers

```
10  REM Program to add two numbers
```

```
20  INPUT n1
```

```
30  INPUT n2
```

```
40  LET total = n1 + n2
```

```
50  PRINT total
```

```
60  END
```

```
35  INPUT n3
```

```
40  LET total = n1 + n2 + n3
```

Countdown

```
10 REM Program to simulate a countdown
20 LET T = 10
30 IF T < 0 THEN 70
40 PRINT T
50 LET T = T - 1
60 GOTO 30
70 END
```

Statements

REM

LET *var* = *exp*

PRINT *exp*

INPUT *var*

END

GOTO *n*

IF *exp cmp exp THEN n*

Interpreter

RUN

LIST

CLEAR

QUIT

HELP

Error Reporting

DIVIDE BY ZERO

INVALID NUMBER

VARIABLE NOT DEFINED

LINE NUMBER ERROR

SYNTAX ERROR

Grading

```
> ./score -f -c
```

```
Trace "../Test/trace/trace00.txt" ... Pass
```

```
Trace "../Test/trace/trace01.txt" ... Pass
```

```
Trace "../Test/trace/trace02.txt" ... Pass
```

```
Trace "../Test/trace/trace03.txt" ... Fail
```

```
Trace file:
```

```
10 REM test line 1
```

```
.....
```

```
3 / 4 trace(s) passed.
```

Q&A