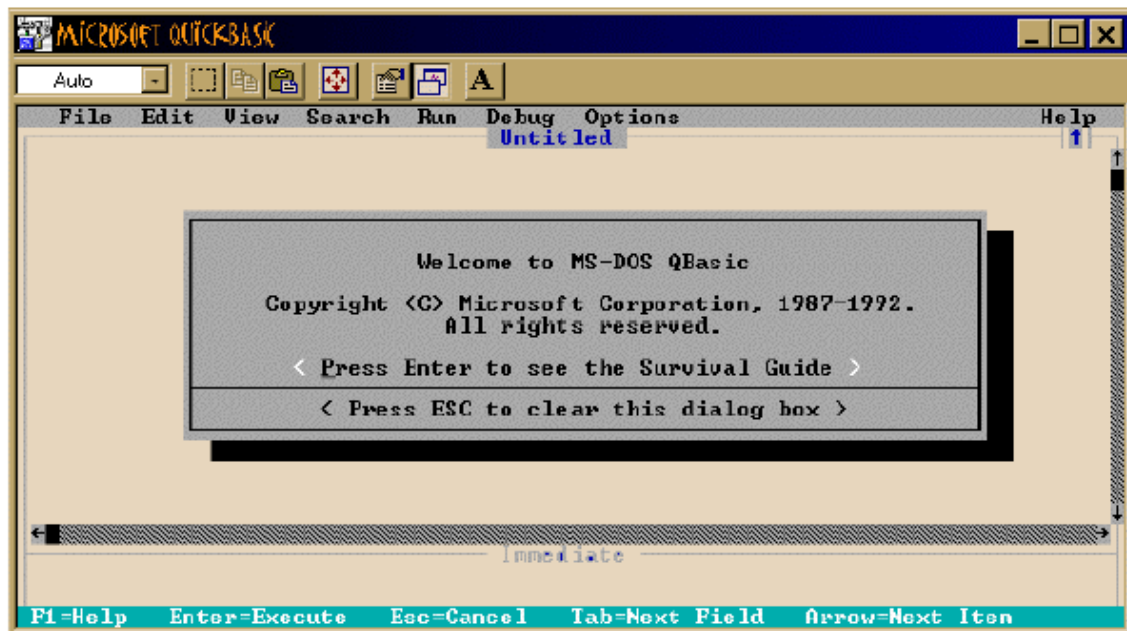


Quick BASIC – *Prof. Richard B. Goldstein*



Opening Screen:

Drop-down Menu:

File	New, Open, Save, Save As, Print, Exit
Edit	Cut, Copy, Paste, Clear, New SUB, New FUNCTION
View	SUBs, Split, Output Screen
Search	Find, Repeat Last Find, Change
Run	Start, Restart, Continue
Debug	Step, Procedure Step, Trace On, Toggle, Backpoint, Clear All Breakpoints, Set Next Statement
Options	Display, Help paths, Syntax Checking
Help	Index, Contents, Topics, Using Help, About

STARTING QBASIC

- (1) From the direct access menu make the choice "Programming Languages" and select QBASIC. In general one can use the **Start** button followed by the **Run...** option. The file is usually located as **C:\dos\qbasic.exe**
- (2) Press **Esc** to skip the introduction.

EXITING QBASIC

Press **Alt, File, eXit**.

CONSTANTS	numeric:	936	-18	17.28	4.538E-11	
	string:		"John Smith"	"Smith, John"		"23 Oak Dr."

VARIABLES	numeric:	A	BX21	GrandTotal	BIG.DATA
	string:	B\$	C5A\$	NAME\$	

Special endings for numbers: % (short integer), & (large integer), ! (single precision), and # (double precision)

QBASIC STATEMENTS - *Prof. Richard B. Goldstein*

General Form: KEYWORD values, expressions, etc.

Statement	General Form	Purpose	Examples
LET	LET variable = expression (Note: the word LET is optional)	algebraic or string depending upon the variable - uses + - * / ^ \ MOD	X = A + B * C J = J + 1 C = SQRT(A*A + B^2)
PRINT	PRINT output list PRINT USING "format-string"; output-list	for any type of output for formatted output	PRINT "Hello"; N\$ PRINT A, B, C\$
LPRINT	same as above	For output to the printer	see samples in handout
END	END	last line of execution - optional	
CLS	CLS	clears the screen	
REM	REM or ' followed by comments	documentation or explanation	REM Program to compute area
INPUT	INPUT variable-list INPUT "prompt"; variable-list (also ,)	simple input from keyboard input with a message	INPUT A, B\$ INPUT "Name :", N\$
IF	IF condition THEN statement(s) END IF	one-way selection	IF X > 5 THEN IF (X > 5) AND (X < 10) THEN IF (X < 3) OR (X > 10) THEN
	IF condition THEN statement(s) ELSE statement(s) END IF	two-way selection	IF GPA > 3.25 THEN PRINT "Honors" ELSE PRINT "Regular Diploma" END IF
FOR/NEXT	FOR variable=start, end, step-size statement(s) NEXT	fixed loop	FOR K = 1 TO 9 PRINT K, K*K NEXT FOR K = A TO B*C STEP -D

DO WHILE	DO WHILE condition statement(s) LOOP	conditional loop	DO WHILE K < 10 PRINT K K = K + 2 LOOP
WHILE/WEND	WHILE condition statement(s) WEND	conditional loop	WHILE A + B < C PRINT A A = A + D WEND WHILE INKEY\$ = "" :WEND
SCREEN	SCREEN n	sets up graphics	SCREEN 12
PSET	PSET (x-coord, y-coord), color	point (pixel)	PSET (200, 100), 3
LINE	LINE (x1,y1)-(x2,y2), color LINE (x1,y1)-(x2,y2), color, B LINE (x1,y1)-(x2,y2), color, BF	line outlined box filled in box	LINE (10, 20) - (50, R), 4 LINE (10, 20) - (50, R), 4, B LINE (20,10) - (10,5), 4, BF
CIRCLE	CIRCLE (xcenter,ycenter), radius, color	circle	CIRCLE (100, 50), 20, 3

Screen	0	Text Mode	
	1	320 by 200	4 color
	2	640 by 200	B/W
	9	640 by 350	16 color
	12	640 by 480	16 color

Colors:	0	Black	8	Gray
	1	Blue	9	Light Blue
	2	Green	10	Light green
	3	Cyan	11	Light cyan
	4	Red	12	Light red
	5	Magenta	13	Light magenta
	6	Brown	14	Yellow
	7	White	15	Bright white

FUNCTIONS

Mathematical

Operations + - * / ^

ABS Y = SQR(X) is the same as $y = |x|$

INT Y = INT(X) is the same as $y = [x]$, the integer part of a number

RND This produces a random number from 0 to 1.

SQR Y = SQR(X) is the same as $y = \sqrt{x}$

String

LEFT\$ A\$ = LEFT\$("Calculus",3) gives "Cal"

LEN N = LEN("Calculus") gives 8

MID\$ A\$ = MID\$("Calculus",4,2) gives "cu"

RIGHT\$ A\$ = RIGHT\$("Calculus",2) gives "us"

Other Capabilities

arrays

DIM A(50), B(20, 20), C\$(10)

built-in functions (some more examples)

ABS, SQRT, SIN, COS, TAN, ATN, LOG, EXP, MOD, RND
LEFT\$, RIGHT\$, MID\$, ASC, CHR\$, LEN, STR\$, VAL

functions & subroutines

DEF FNR(X,Y) = 4*X^3/(2*Y - SQR(X))
GOSUB ABC(R, C\$)

saving & reading text files - sequential or random-access

OPEN "A:\ABC" FOR OUTPUT AS #1
PRINT #1, X, Y\$
CLOSE #1

sound

BEEP
SOUND 4000, 100 ' frequency, duration

chaining to different modules

RUN "A:\DEMOS\XYZ.EXE"

Common Statements

Graphics and Screen Display

CIRCLE PRINT	CLS PRINT USING	COLOR PSET	LINE	LOCATE
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Files

CLOSE OPEN	GET PRINT#	INPUT# WRITE#	LINE INPUT#
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Times and Dates

DATE\$	TIME\$	TIMER
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Variables - Data Typing and Assignment

CLEAR READ	DATA RESTORE	INPUT	(LET)	LINE INPUT
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Arrays

DIM	ERASE	OPTION BASE	REDIM
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Loops and Decisions

DO IF	END NEXT	ENDIF SELECT CASE	FOR WEND	GOTO WHILE
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Subprograms, Functions, and Subroutines

CALL GOSUB	COMMON ON GOSUB	DECLARE RETURN	DEF FN SUB	FUNCTION
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Sound and Music

BEEP	PLAY	SOUND
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Printer

LPRINT	LPRINT USING
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Functions (Numeric)

ABS COS RND	ASC EXP SGN	ATN FIX SIN	CDBL INT SQR	CINT LOG TAN
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Functions (String)

CHR\$ RIGHT\$	LCASE\$ SPACE\$	LEFT\$ STRING\$	LEN UCASE\$	MID\$
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Formatting

SPC	TAB
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Operators

AND	MOD	NOT	OR
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