

## Reserved Words Table

and  
end  
for  
goto  
if  
input  
next  
or  
print  
read  
rem  
step  
then  
to

## Prog1.bas Table

```
10 rem
12 input x1,y
13 if x1<y then goto 15
14 zee = x1-y
11 goto 16
15 zee = x1+2*y
16 print x1,y,zee
17 for i = 1 to 16 step 5
18 print i
19 next i
20 input st%
21 print "$", st%
22 input x
23 if y >= x1 then x = y^3
24 print x1,#
25 end
```

## Action Table

	Letter	Digit	Period	Delimiter	Blank	Pod	EOLN	Illegal
NewToken	1	1	5	1	6	5	6	7
ReservedWord	1	1	4	8	2	10	2	11
Variable	1	1	4	9	3	12	3	13

44	Integer	9	1	1	9	3	4	3	13
45	Real	9	1	4	9	3	4	3	13
46	Delimiter	9	9	4	12	3	4	3	13

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50 Explanations Table

51 1 Load character and continue

52 2 Compare with table of reserved words, print token, reinitialize token

53 3 Print token, reinitialize token

54 4 Print token, write "Improper usage", print character, reinitialize token

55 5 Write "Improper usage", print character

56 6 Continue

57 7 Write "Illegal character", print character

58 8 Compare with table of reserved words, print token, reinitialize token, load char

59 9 Print token, reinitialize token, load character

60 10 Load character, change state to variable, print token, reinitialize token

61 11 Compare with table of reserved words, print token, write "Illegal character", print char

62 12 Load character, print token, reinitialize token

63 13 Print Token, write "Illegal Character", print character, reinitialize token

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68 State Table

69 |Letter |Digit |Period |Delimiter |Blank |Pod |EOLN |Illegal

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71 NewToken |ReservedWord|Integer |NewToken |Delimiter |NewToken |NewToken |NewToken |NewToken |

72 ReservedWord|ReservedWord|Variable |NewToken |Delimiter |NewToken |NewToken |NewToken |NewToken |

73 Variable |Variable |Variable |NewToken |Delimiter |NewToken |NewToken |NewToken |NewToken |

74 Integer |ReservedWord|Integer |Real |Delimiter |NewToken |NewToken |NewToken |NewToken |

75 Real |ReservedWord|Real |NewToken |Not Valid |NewToken |NewToken |NewToken |NewToken |

76 Delimiter |ReservedWord|Integer |NewToken |NewToken |NewToken |NewToken |NewToken |NewToken |

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79 SCANNER RESULTS:

80 Error? TOKEN TOKEN-TYPE

81 10 Integer

82 rem ReservedWord

83 12 Integer

84 input ReservedWord

85 x1 Variable

86 , Delimiter

87	y	Variable
88	13	Integer
89	if	ReservedWord
90	x1	Variable
91	<	Delimiter
92	y	Variable
93	then	ReservedWord
94	goto	ReservedWord
95	15	Integer
96	14	Integer
97	zee	Variable
98	=	Delimiter
99	x1	Variable
100	-	Delimiter
101	y	Variable
102	11	Integer
103	goto	ReservedWord
104	16	Integer
105	15	Integer
106	zee	Variable
107	=	Delimiter
108	x1	Variable
109	+	Delimiter
110	2	Integer
111	*	Delimiter
112	y	Variable
113	16	Integer
114	print	ReservedWord
115	x1	Variable
116	,	Delimiter
117	y	Variable
118	,	Delimiter
119	zee	Variable
120	17	Integer
121	for	ReservedWord
122	i	Variable
123	=	Delimiter
124	1	Integer
125	to	ReservedWord
126	16	Integer
127	step	ReservedWord
128	5	Integer
129	18	Integer

```
130         print    ReservedWord
131             i      Variable
132             19     Integer
133         next      ReservedWord
134             i      Variable
135             20     Integer
136         input      ReservedWord
137             st%     Variable
138             21     Integer
139         print      ReservedWord
140             "       Delimiter
141 Improper Usage:    $
142                 ", Delimiter
143                 st% Variable
144                 22 Integer
145         input      ReservedWord
146             x      Variable
147             23     Integer
148         if         ReservedWord
149             y      Variable
150             >=     Delimiter
151             x1     Variable
152         then       ReservedWord
153             x      Variable
154             =       Delimiter
155             y      Variable
156             ^       Delimiter
157             3      Integer
158             24     Integer
159         print      ReservedWord
160             x1     Variable
161             ,       Delimiter
162 Illegal Character: #
163             25     Integer
164         end        ReservedWord
165
```