# Tokens

# letter digit

MP_AND
MP_BEGIN
MP_BOOLEAN
MP_DIV
MP_DO
MP_DOWNTO
MP_ELSE
MP_END
MP_FALSE
MP_FIXED
MP_FLOAT
MP_FOR
MP_FUNCTION
MP_IF
MP_INTEGER
MP_MOD
MP_NOT
MP_OR
MP_PROCEDURE
MP_PROGRAM
MP_READ
MP_REPEAT
MP_STRING
MP_THEN
MP_TRUE
MP_TO
MP_Type
MP_UNTIL
MP_VAR
MP_WHILE
MP_WRITE

MP\_WRITELN

```
MP_IDENTIFIER
```

MP\_INTEGER\_LIT

MP\_FIXED\_LIT

MP\_FLOAT\_LIT

MP\_STRING\_LIT

## MP\_ASSIGN

MP\_COLON

MP\_COMMA

MP\_EQUAL

## MP\_FLOAT\_DIVIDE

MP\_GEQUAL

MP\_GTHAN

MP\_LEQUAL

MP\_LPAREN

MP\_LTHAN

MP\_MINUS

MP\_NEQUAL

MP\_PERIOD

MP\_PLUS

MP\_RPAREN

MP\_SCOLON

MP\_TIMES

MP\_EOF

MP\_RUN\_COMMENT

MP\_RUN\_STRING

MP\_ERROR

#### microPascal Tokens

#### Lexemes

## **Auxiliary Regular Expressions**

a|b|c|...|z|A|B|C|...|Z 0|1|2|3|4|5|6|7|8|9

#### **Reserved Words**

```
"and"
"begin"
"Boolean"
"div"
"do"
"downto"
"else"
"end"
"false"
"fixed"
"float"
"for"
"function"
"if"
"integer"
"mod"
"not"
"or"
"procedure"
"program"
"read"
"repeat"
"string"
"then"
"true"
"to"
"type"
"until"
"var"
"while"
"write"
```

"writeln"

#### **Identifiers and Literals**

```
(letter | "_"(letter | digit)){["_"](letter | digit)}
digit{digit}
digit{digit} "." digit{digit}
(digit{digit} | digit{digit} "." digit{digit}) ("e"|"E")["+"|"-"]digit{digit}
"'" {"''" | AnyCharacterExceptApostropheOrEOL} "'"
```

## **Single String Tokens**

```
":="
":"
","
"="
"/"
">="
">"
"<="
"("
"<"
" - "
"<>"
"."
"+"
")"
";"
11 * 11
```

## **Special Tokens**

```
token for end-of-file character
token for run-on comment error
token for run-on string error
token for other scan errors
```

Adam

Tim

JJ

Adam

Tim JJ

Adam

Tim

JJ

Adam

Tim

JJ

Adam

Tim

Tim

Tim

JJ

Adam

Tim

JJ

Adam