

## CPSC 323-06 | PROJECT 1 | Programming Assignment 1 | 2 April 2023

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### Regular Expressions

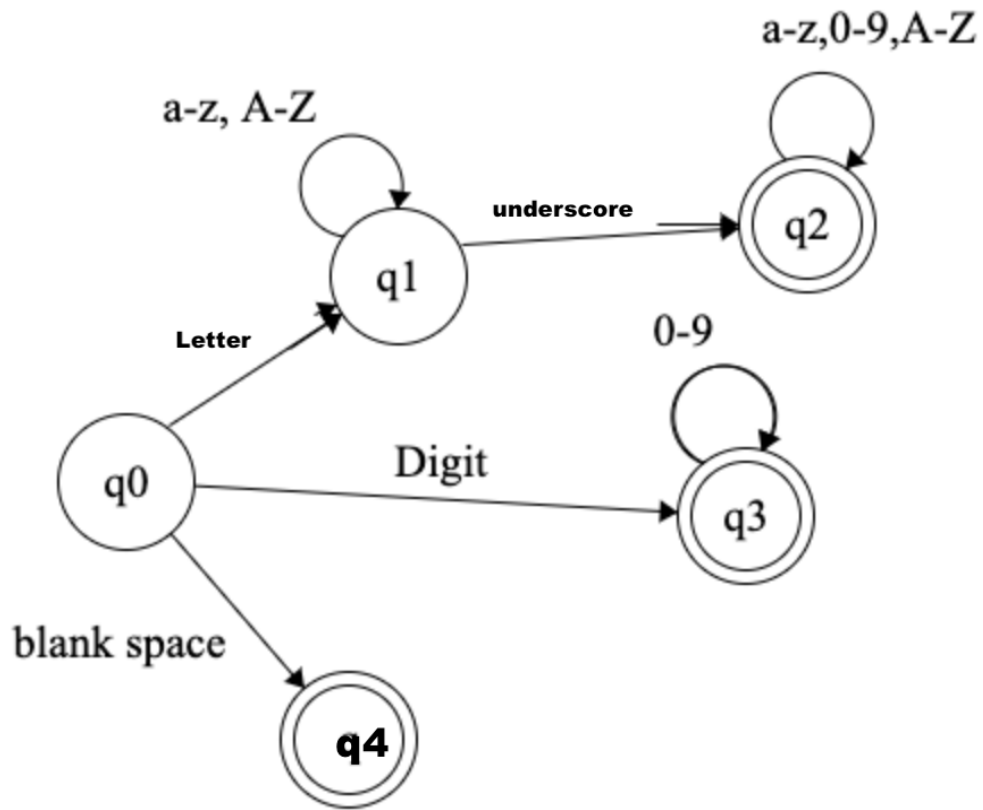
<Keyword>	::= while   if   float   double   int   string
<Declaration>	::= <Keyword> <ID>
<ID>	::= <Identifier>   <Identifier>, <ID>
<Assign>	::= <Identifier> = <Expression> ;
<If>	::= if ( <Condition> ) <Statement>   if ( <Condition> ) <Statement> else <Statement>
<While>	::= while ( <Condition> ) <Statement>
<Condition>	::= <Expression> <Operation> <Expression>
<Operation>	::= ==   !=   >   <   <=   =>   =
<Real>	::= - <1-9>   <1-9>   0
<Literal>	::= <a-z>   <A-Z>
<Separator>	::= [   ]   (   )   ;   ,

### FSA for Identifiers and Integers

Regular Expression:  $L(L|D|_)*$

Expression must start with at least one L = letter and be followed by at least one D = digit or underscore. "File\_2" is accepted while "6\_var" is not accepted. "array4\_" is accepted but "\_var3" is not accepted.

## NFSM



## State Table

	Letter	Digit	Underscore
0	0	0,1	{}
1	1	1	1
2	{}	2	{}

# DFSM

