



Sheet 1 (Scanner using Hand-coded)

Q1) Consider the following syntax of a language L. Using hand-coded strategy, Implement a C++ program for accepting this language L.

```
<program>::= cin  >> <expr-seq>| cout << <expr-seq>
<expr-seq>::=<expr> | <expr-seq> <expr>
<expr>::= <id>|<int> | <real> | ( + <expr-seq>)
           | ( * <expr-seq>)
<int>::= <D> | <int> <D>
<real>::= <int> . <int> | . <int>
<id>::= <L>| <id><L-or-D>
<L-or-D>::= <L> | <D>
<L> ::= a| b|...|z |A|B|...|Z
<D> ::= 0|1|...|9
```

Q2) Consider the following rules will be added to the above grammar, modify your hand-coded to accept them:

<exp>::=<id> <rel> <id>

<exp>::=<id> <op> <id>

<rel>::=<=|<|>|>=|==|<>

<op>::= .* | ^ | / |