## **IMPLEMENTATION OF LR(0) ITEMS**

#### **EX. NO. 9**

Parth Langalia

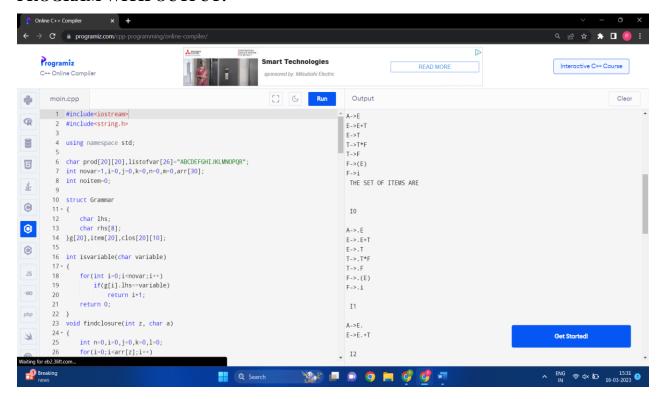
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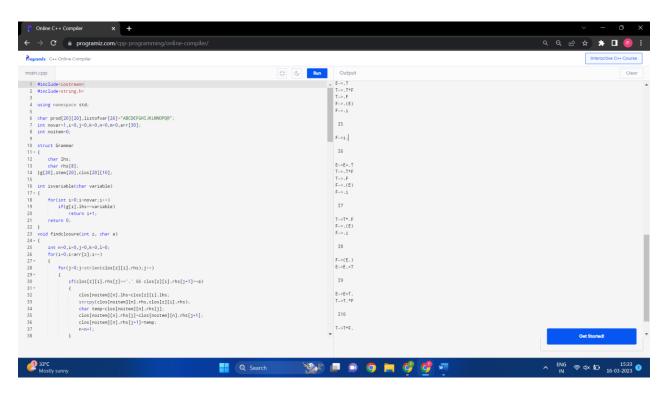
**AIM:** : A program to implement LR(0) items

# **ALGORITHM:**

- 1. Start.
- 2. Create structure for production with LHS and RHS.
- 3. Open file and read input from file.
- 4. Build state 0 from extra grammar Law  $S' \rightarrow S$  \$ that is all start symbol of grammar and one Dot ( . ) before S symbol.
- 5. If Dot symbol is before a non-terminal, add grammar laws that this non-terminal is in Left Hand Side of that Law and set Dot in before of first part of Right Hand Side.
- 6. If state exists (a state with this Laws and same Dot position), use that instead.
- 7. Now find set of terminals and non-terminals in which Dot exist in before.
- 8. If step 7 Set is non-empty go to 9, else go to 10.
- 9. For each terminal/non-terminal in set step 7 create new state by using all grammar law that Dot position is before of that terminal/non-terminal in reference state by increasing Dot point to next part in Right Hand Side of that laws.
- 10. Go to step 5.
- 11. End of state building.
- 12. Display the output.
- 13. End.

## **PROGRAM WITH OUTPUT:**





# **RESULT:**

The predictive parsing table has been implemented successfully.