BEGIN

PRINT "How many fibonacci numbers do you want?"

INPUT nums

LET a = 0

LET b = 1

WHILE nums > 0 REPEAT

PRINT a

LET c = a + b

LET a = b

LET b = c

LET nums = nums - 1

ENDWHILE

END

Write a Translator:

Enter the path: <user inputs the path of the file containing the code in **.txt**>

Correct!!!

Translating to C++ code <output to the file with the same name but in **.cpp**>

**LANGUAGE SPECIFICATION**

<program> ::= 'BEGIN' <newlines> <statements> <newlines> 'END'

<statements> ::= <print\_statement><newline><statements>|<input\_statement><newline><statements>

|<let\_statement><newline><statements>|<if\_statement><newline><statements>|<while\_statement><newline><statements>|empty

<print\_statement> ::= 'PRINT' <string>|'PRINT' id

\*\*\*<string> ::= '"'<chars>'"'\*\*\*

\*\*\*<chars> ::= empty|<char><chars>|<num><chars>|<space><chars>\*\*\*

<input\_statement> ::= 'INPUT' <id>

\*\*\*<id> ::= <char><post\_id> \*\*\*

\*\*\*<post\_id> ::= <char><post\_id>|<digit><post\_id>|empty \*\*\*

\*\*\*<char> ::= 'a'|...|'z'|'A'|...|'Z' \*\*\*

\*\*\*<digit> ::= 0|...|9 \*\*\*

<number> ::= '-'<num>|'+'<num>|<digit> (<num>)

\*\*\*<num> ::= <digit><num>|<digit> \*\*\*

\*\*\*<space> ::= ' '\*\*\*

<let\_statement> ::= 'LET' <assignment>

<assignment> ::= <id> = <expression>

<expression> ::= <id>|<num>|<exp> '+' <exp>| <exp> '-' <exp>| <exp> '\*' <exp>| <exp> '/' <exp>| <exp> 'mod' <exp>

<exp> := <id>|<number>

<if\_statement> := 'IF' <condition> <newline> <statements> <newline> 'ENDIF'

<while\_statement> := 'WHILE' <condition> ‘REPEAT’<newline> <statements> <newline> 'ENDWHILE'

<condition> ::= <expression> <compare> <expression>

\*\*\*<compare> ::= '>'|'<'|'>='|'<='|'=='\*\*\*