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>

<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> ::= <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> <newline> <statements> <newline> 'ENDWHILE'

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

<compare> ::= '>'|'<'|'>='|'<='|'=='