program = header , namespace, {user\_defined\_type}, “int main() {“, code\_block, “}”

user\_defined\_type = “struct “ name “{“ declare\_instruction”;” “};”

header = “#include<”lib\_name”>”,{“#include<”lib\_name”>”}

lib\_name = letter | digit | special\_char, { letter | digit | special\_char }

namespace = “using namespace std;”

code\_block = instruction\_list, “return 0;”

instruction\_list = {instruction}

instruction = io\_instruction“;” | declare\_instruction“;” | assign\_instruction“;” | if\_instruction | while\_instruction

io\_instruction = input\_instruction | output\_instruction

input\_instruction = “cin>>”ID,{“>>”ID}

output\_instruction = “cout<<”ID | CONST, {“<<” ID | CONST}

declare\_instruction = type ID[“[“number”]”]{“,” ID[“[“number”]”]}

assign\_instruction = ID “=” CONST | ID {operator, CONST | ID}

if\_instruction = “if(“condition”) {“instruction\_list”}”

condition = boolean\_expression { && | ||, boolean\_expression}

boolean\_expresion = ID | CONST operator ID | CONST

while\_instruction = “while(“condition”) {“instruction\_list”}”

digit = [0-9]

number = [1-9][0-9]+

type = “int” | “char” | “float”

letter = [a-z]+

special\_char = “/” | “\” | “\_” | “-“

ID = letter{letter}

CONST = number

operator = “+” | “-“ | “/” | “\*” | “<=” | “>=” | “<” | “>” | “!=” | “==”

Programs

#include<iostream>

using namespace std;

int main(){

int r;

cin>>r;

cout<<”Aria: “<< 3.14\*r\*r<<” “;

cout<<”Lungimea: “<< 2\*3.14\*r;

return 0;

}

#include<iostream>

using namespace std;

int main(){

int a,b;

cin>>a>>b;

while(a!=b) {

if(a>=b) {

a=a – b;

}

if(a<b) {

b=b -a;

}

}

cout<<a;

return 0;

}

#include<iostream>

using namespace std;

int main(){

int n, x, s;

s=0;

cin>>n;

int i;

i=1;

while(i<=n){

cin>>x;

s=s+x;

i=i+1;

}

cout<<s;

return 0;

}

#include<iostream>

using namespace std;

int main(){

int a;

3=a;

a=2

return 0;

}

#include<iostream>

using namespace std;

int main(){

int a=3;

}