Exam starts here

Question 1: (5 marks)
Run your project with the following input and write the output you get in the ***Ouput*** box and then optimize it:

Input	Output	Optimization

if (x-3) then
begin
x=3* y;
while (2+x)
do
y=y-1;
end		

Question 2: we change the grammar of phase 4 as it is shown in the rule 2. Answer the following questions: (15 marks: A(5), B(5), C(5))

1. Start → stmt eof
2. Stmt → id = expr
| if (expr) then stmt
| while (**logexpr**) do stmt
| begin CS end
 	
3. CS → stmt ; CS | □
4. **logexpr** ->expr **rest31**
5. **rest31**→ **and** expr **{Igex(0)}** |
or expr **{Igex(1)}** |
$ **{Igex(2)}**
 	
void Igex (int relop) {
 	
switch(relop){
 	
case 0: printf("pop r2\npop rl \nand r1.r2\nbe endwhile\n");
break:
 	
case 1: printf("pop r2npop ri\nor r1.r2\nbe endwhile\n");
 	
break:
 	
case 2: printf("pop r2\nemp r2.0\nbe endwhile\n");
 	
break:
 	
}}
	Parse.h

B- *What has to be modified in the next files:*

Global.h	**Init.c**

C- *Give the output of the following input:*

Input	Output	

while (x and 1) do
while (y or x+2) do
y = y*x		