A)(45 p) Create a program in C with the following requirements:

1) Program reads real numbers from file F41.txt and pushes them into stack A.

2) Program reads natural numbers from file F42.txt and pushes them into another stackB.

3) Program asks for real number input from the keyboard.

4) Array of numbers C is calculated using the following equation:

C0 = X

Ci = Ci-1 \* (-1) + $\sqrt{(Ai\*Ai+Bi\*Bi)}$

 …

For finding Ci elements Ai and Bi must both exists. If not, the calculation will finish.

5) Finally the program should display the sum of Ci elements on the screen and write the individual Ci results into file F43.txt.

***NB!Use dynamical memory allocation and recursion when applicable.***

B)(5 p) Explain the following code snippet:

struct {

 double value ;

 struct Stack \*next \_ptr ;

} Stack ;

. . .

Stack stack ;

stack.next \_ptr = malloc ( sizeof (Stack ) ) ;

C) (5p) Write an example of a function using the following code snippet

char \*buffer ;

buffer = ( char \* ) calloc ( i +1);