DAY 6

Question 1

Write a function to find the maximum element in the stack.

Question 2

Write a function to find the minimum element in the stack.

#include <stdio.h>

#include <stdlib.h>

int data[10], top, max=0, min=0;

void push(int x)

{

top++;

data[top]=x;

if(max < data[top])

max = data[top];

if(min > data[top])

min = data[top];

}

void pop()

{

int i;

if(max == data[top])

max=0;

if(min == data[top])

min=0;

printf("\n Top element deleted from the stack : %d",data[top]);

top--;

for(i= top;i>=0;i--) {

if(max < data[i])

max = data[i];

if(min > data[i])

min = data[i];

}

}

int main()

{

int elem, choice;

top = -1;

do

{

printf("\n Choose one of the options");

printf("\n 1. Push an element\n 2. Pop an element\n 3. Display max value in the stack\n 4. Display min value in the stack");

printf("\n 5. Quit \n Enter your choice : ");

scanf("%d ",&choice);

switch(choice)

{

case 1:

printf("\n Enter a number to be pushed into the stack : ");

scanf("%d ",&elem);

push(elem);

break;

case 2:

pop();

break;

case 3:

printf("\n The current Max value in the stack is : %d",max);

break;

case 4:

printf("\n The current Min value in the stack is : %d",min);

break;

case 5:

printf("\n Quit");

break;

default:

printf("\nInvalid input");

}

}while(choice!=5);

return 0;

}