1. Write a C program to implement Stack operations such as PUSH, POP and PEEK

#include<stdio.h>

#include<stdlib.h>

#define Size 4

int Top=-1, inp\_array[Size];

void Push();

void Pop();

void show();

int main()

{

int choice;

while(1)

{

printf("\nOperations performed by Stack");

printf("\n1.Push the element\n2.Pop the element\n3.Show\n4.End");

printf("\n\nEnter the choice:");

scanf("%d",&choice);

switch(choice)

{

case 1: Push();

break;

case 2: Pop();

break;

case 3: show();

break;

case 4: exit(0);

default: printf("\nInvalid choice!!");

}

}

}

void Push()

{

int x;

if(Top==Size-1)

{

printf("\nOverflow!!");

}

else

{

printf("\nEnter element to be inserted to the stack:");

scanf("%d",&x);

Top=Top+1;

inp\_array[Top]=x;

}

}

void Pop()

{

if(Top==-1)

{

printf("\nUnderflow!!");

}

else

{

printf("\nPopped element: %d",inp\_array[Top]);

Top=Top-1;

}

}

void show()

{

if(Top==-1)

{

printf("\nUnderflow!!");

}

else

{

printf("\nElements present in the stack: \n");

for(int i=Top;i>=0;--i)

printf("%d\n",inp\_array[i]);

}

}