```c
#include <stdio.h>
#include <stdlib.h>
#define MAX 30
int stack[MAX], topx = -1, topy = MAX;
void pushx(int value)
{
if(topx == topy-1)
printf("\n The stack is Overflow");
else
{
topx+=1;
stack[topx] = value;
}
}
int popx()
{
int value;
if(topx == -1)
{
printf("\n The stack is Underflow");
value = -123;
}
else
{
value = stack[topx];
topx--;
}
return value;
}
void display_stackx()
{
int i;
if(topx == -1)
printf("\n Stack x is empty");
else
{
for(i = topx;i >= 0;i--)
printf("\t %d",stack[i]);
}
}
void pushy(int value)
{
if(topy-1 == topx)
printf("\n The stack is Overflow");
else
{
topy-=1;
stack[topy] = value;
}
}
int popy()
{
int value;
if(topy == MAX)
{
printf("\n The stack is Underflow");
value = -123;
}
else
{
value = stack[topy];
topy++;
}
}
void display_stacky()
{
```

```c
int i;
if(topy == MAX)
printf("\n Stack y is Empty");
else
{
for(i = topy; i < MAX;i++)
printf("\t %d",stack[i]);
}
}
int main()
{
int choice, value;
do
{
printf("\n -----Menu----- ");
printf("\n 1.Hey! PUSH an element into Stack x");
printf("\n 2.Hey! PUSH an element into Stack y");
printf("\n 3.Hey! POP an element from Stack x");
printf("\n 4.Hey! POP an element from Stack y");
printf("\n 5. Display the Stack x");
printf("\n 6. Display the Stack y");
printf("\n 7. Exit");
printf("\n Please Enter your choice");
scanf("%d",&choice);
switch(choice)
{
case 1:
printf("\n Enter the value to push on stack x :");
scanf("%d",&value);
pushx(value);
break;
case 2:
printf("\n Enter the value to push on stack y:");
scanf("%d", &value);
pushy(value);
break;
case 3:
if(value != -123)
printf("\n The value popped from Stack x = %d", value);
break;
case 4:
if(value != -123)
printf("\n The value popped from Stack y = %d",value);
break;
case 5:
printf("\n The contents of Stack x are :\n");
display_stackx();
break;
case 6:
printf("\n The contents of Stack y are :\n");
display_stacky();
break;
}
}
while(choice != 7);
return 0;
}
```