Lab Program 1

①
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#include <stdio.h>
#include <stdlib.h>
int stack[50];
int ch;
void push(void);
void pop(void);
void display(void);
int n, top, no, i;
int main()
{
top = -1;
printf("\n Enter the size of stack:");
scanf("%d", &n);
printf("\n Please enter the stack operation
which you want to peryarm:");
printf("\n 1. Push\n 2. Pop\n 3. display\n 4.exit");
while (ch != 0)
{
printf("\n Enter the choice:");
Scanf("%d", &ch);
Switch (ch)
{
case 1:
  push();
  break;
case 2:
  pop();
  break;
case 3;
  display();
  break;
```

```
case 4:
   exit(0);
   break;
default:
 }
 printf("\n INVALID CHOICE");
 }
 }
 }
return 0;
}
void push()
{
if (top >= n-1)
 {
printf("\n STACK OVERFLOW");
}
else
{
printf("Enter a value to be inserted/pushed:");
Scanf("%d", &no);
top++;
stack[top]= no;
}
}
Void pop()
{
 if(top<=-1)
{
printf("\n UNDERFLOW");
}
else
```

```
{
printf("\n the popped element is %d", stack[top]);
top--;
}
}
void display()
{
if(top>=0)
{
printf("\n the elements in stack are as follows
:\n");
for(i=top; i>=0; i--)
printf("\n%d", stack[i]);
printf("\n Press Next choice");
}
else
{
printf("\n the stack is empty");
}
}
```