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1BM19CS052
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STACK PROGRAM

Q.
```
#include <stdio.h>
#define size 3
int top = -1;
void push (int [], int);
int pop (int []);
void display (int []);
int main (int argc, char ** argv)
{
  int stack [size];
  int choice, element;
  char ch;
  do
{
  printf ("Enter your choice \n");
  printf ("1. Push \n");
  printf ("2. Pop \n");
  printf ("3. Display \n");
  scanf ("%d", & choice);
  switch (choice)
{
  case 1: printf ("Enter the element to be pushed
                   \n");
          scanf ("%d" & element);
          push (stack, element);
          break;

  case 2: element = pop (stack);
          if (element == -1)
            printf ("stack Underflow");
```

```
        else
            printf("Poped element is %d\n", element);
            break;
    Case 3: display(stack);
            break;
    default: printf("Invalid choice");
    }
    printf("Do you want to continue:\n");
    fflush(stdin);
    scanf("%c", &ch);
    } while(ch=='y' || ch=='Y');
    return 0;
}
```

(1) Void push(int stack[], int ele)

```
{
    if(top == size-1)
    {
        printf("stack overflow");
    }
    else
    {
        top++;
        stack[top] = ele;
    }
}
```

(2) int pop(int stack[])

```
{
    int popele;
    if(top == -1)
```

```
    return -1;
  else
  {
    ~~popele~~ popele = stack[top];
               top--;
               return (popele);
    }

}
```

(iii)

```
Void display (int stack[])
{
  int i;
  printf ("The stack elements \n");
  for (i= top; i>=0; i--)
  {
    printf ("%d\t", stack[i]);
  }
}
```