Program 1

Q) WAP to stimulate the working of stack using an array
a) push
b) pop
c) display.

```c
#include <stdio.h>
#include <conio.h>
#define stacksize 5
int top = -1;
int s[10];
int item;
void push()
{
    if (top == stacksize -1)
    {
        printf("stack overflow \n");
        return;
    }
    top = top +1;
    s[top] = item
}
int pop ()
{
    if(top == -1) return -1;
    return s[top--];
}
void display()
{
```

```c
int i;
if (top==-1)
{
    printf ("stack is empty \n");
    return;
}
    printf ("contents of the stack \n");
    for (i=0; i<=top; i++)
    {
        printf("%d", s[i]);
    }
}

void main()
{
    int item_delete;
    int choice;
    while (1)
    {
        printf ("\n 1. push \n 2. pop \n 3. display ");
        printf ("enter the choice \n");
        scanf ("%d", &choice);
        switch (choice)
        {
            case 1: printf ("enter item to be inserted \n");
            scanf ("%d", &item);
            push(item);
            break;
            case 2: item_delete = pop();
            if (item_delete==-1)
            printf (" stack is empty \n");
            else
```

```
          printf ("item deleted is %d \n", item_delete);
          break;
          case 3:  display();
          break;
          default : printf ("invalid \n")
          break;
          }
          }

          getch()
          }
```