

Lap program 1

write a program to simulate the working of stack using an array including push, pop, display program and display appropriate.

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

```

}
else
{
return s[top--];
}
}
void display()
{
int i;
if (top == -1)
{
printf("stack empty");
return;
}
else
{
printf("contents of stack\n");
for (i=top; i>=0; i--)
{
printf("%d\n", s[i]);
}
}
}
}

```

```
int main ()
```

```
{
```

```
    int item_deleted;
```

```
    int choice;
```

```
    for (;;) 
```

```
    { printf ( " \n 1. push 2. Pop : 3. display  
      4. exit \n " );
```

```
      printf ( " enter choice \n " );
```

```
      scanf ( " %d ", &choice);
```

```
      switch (choice)
```

```
{
```

```
    case 1 : printf ( " Enter Item : " );
```

```
              scanf ( " %d ", &item);
```

```
              push ();
```

```
              break;
```

```
    case 2 : item_deleted = pop();
```

```
              if (item_deleted == -1)
```

```
              {
```

```
                  printf ( " stack empty \n " );
```

```
              }
```

```
            else
```

```
            {
```

```
                printf ( " item deleted is %d \n ",  
                        item_deleted);
```

```
            }
```

break;

case 3 : display();

break;

default : emit();

}

}

getch();

}