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Batch A3

Code:

```
// Stack operations practice
```

```
#include <stdio.h>
```

```
int Top = -1;
```

```
int inp_array[5];
```

```
int main() {
```

```
    int choice;
```

```
    printf("1.push function");
```

```
        printf("\n2.pop function");
```

```
        printf("\n3.display stack");
```

```
        printf("\n4.peek function");
```

```
        printf("\n5.check if stack is empty or full");
```

```
while(1)
```

```
{
```

```
    printf("\n\nEnter the choice:");
```

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

```
    switch(choice)
```

```
{
```

```
        case 1: push();
```

```
                break;
```

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

```
                break;
```

```
        case 3: display();
```

```
                break;
```

```
                case 4:peek();
                    break;
            case 5:check();
                break;
        }
    }

    return 0;
}

void push()
{
    int x;
    printf("enter element you want to add :");
    scanf("%d",&x);
    Top=Top+1;
    inp_array[Top]=x;
}

void pop()
{
    Top=Top-1;
}

void display()
{
```

```

    for(int i=Top;i>=0;--i)
        printf("%d\n",inp_array[i]);
}

void peek()
{
    printf("Top elemnt is %d ",inp_array[Top]);
}

void check()
{
    if(Top==4){
        printf("stack is full");
    }
    else{
        printf("stack is empty");
    }
}

```

Output:

/tmp/g769ULnDVN.o

- 1.push function
- 2.pop function
- 3.display stack
- 4.peek function
- 5.check if stack is empty or full

Enter the choice:1

enter element you want to add :1

Enter the choice:1

enter element you want to add :2

Enter the choice:1

enter element you want to add :3

Enter the choice:1

enter element you want to add :4

Enter the choice:3

4

3

2

1

Enter the choice:2

Enter the choice:3

3

2

1

Enter the choice:4

Top elemnt is 3

Enter the choice:5

stack is empty

Enter the choice: