

```
def square_free(n):#main square free function with n as input
```

```
    if n==0:
```

```
        return '1'
```

```
    ans=""
```

```
    prev=square_free(n-1)#calling with n-1
```

```
    for i in range(len(prev)):
```

```
        if i%2==0:
```

```
            if prev[i]=='1':
```

```
                ans=ans + '123'
```

```
            elif prev[i]=='2':
```

```
                ans=ans+ '231'
```

```
            else:
```

```
                ans=ans + '312'
```

```
        else:
```

```
            if prev[i]=='1':
```

```
                ans=ans+ '321'
```

```
            elif prev[i]=='2':
```

```
                ans=ans + '132'
```

```
            else:
```

```
                ans=ans +'213'
```

```
    return ans
```

```
n=int(input("enter value of n: "))#taking input from user
```

```
print(square_free(n))#calling function
```