

## Experiment No : 2

```
customer_ids=[401,402,403,404,405,406,407]
```

```
def linear_search(ids,key):
```

```
    print("\n linear search")
```

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

```
        if ids[i]==key:
```

```
            print(f"customer id {key} found at position {i+1}.")
```

```
            return True
```

```
    print(f"customer id {key} not found")
```

```
    return False
```

```
def binary_search(ids,key):
```

```
    print("\n binary search")
```

```
    low=0
```

```
    high=len(ids)-1
```

```
    while low<=high:
```

```
        mid=(low+high)//2
```

```
        if ids[mid]==key:
```

```
            print(f"customer id {key} found at position {mid+1}.")
```

```
            return True
```

```
        elif key<ids[mid]:
```

```
            high=mid-1
```

```
else:
```

```
    low=mid+1
```

```
print(f"customer id {key} not found")
```

```
return False
```

```
print("customer account id:",customer_ids)
```

```
key=int(input("Enter a customer id to search:"))
```

```
linear_search(customer_ids,key)
```

```
binary_search(customer_ids,key)
```