

Program - 28 Implement function of dictionary using hashing

//search function

```
void Dictionary :: search (int key)
{
    int flag = 0;
    index = int (key % max);
    temp [index] = root [index];
    while (temp [index] != NULL)
    {
        if (temp [index] -> data == key)
        {
            cout << "in search success ";
            flag = 1;
            break;
        }
        else
            temp [index] = temp [index] -> next;
    }
    if (flag == 0)
        cout << "in search unsuccessful ";
}
```

//Dictionary

```
Dictionary :: Dictionary ()
{
    index = -1;
    for (int i = 0; i < max; i++)
    {
        root [i] = NULL;
        ptr [i] = NULL;
        temp [i] = NULL;
    }
}
```

// insert function

void Dictionary :: insert( int key )

{  
    index = int (key % max);  
    ptr[index] = (node-type\*) malloc (size of (node-type));

    ptr[index] → data = key;

    if (root[index] == NULL)

    {  
        root[index] = ptr[index];  
        root[index] → next = NULL;  
        temp[index] = ptr[index];

    }

else

{

    temp[index] = root[index];

    while (temp[index] → next != NULL)

        temp[index] = temp[index] → next;

    temp[index] → next = ptr[index];

    }

}

// Delete function

void Dictionary :: delete\_ele ( int key )

{  
    index = int (key % max);

    temp[index] = root[index];

    while (temp[index] → data != key && temp[index] != NULL)

    {  
        ptr[index] = temp[index];

        temp[index] = temp[index] → next;

    }

```
ptr[index] → next = temp[index] → next;
```

```
cout << " " << temp[index] → data << " has deleted" ;
```

```
temp[index] → data = -1;
```

```
temp[index] → null;
```

```
free(temp[index]);
```

```
}
```