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APS

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18D18C5043

## Functions of Dictionary using Hashing

Program

node, \*ptr[max], \*root[max], \*temp[max]

Initialize all the array elements to NULL

insert (int key)

{

index = int (key % max);

ptr[index] = ~~new Node()~~ new Node()

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];

}

}

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```
search (int key)
{
    int flag = 0;
    index = int (key % max);
    temp [index] = root [index];
    while (temp [index] != NULL)
    {
        if (temp [index] → data == key)
        {
            cout << "Key found";
            flag = 1;
            break;
        }
        else temp [index] = temp [index] → next;
    }
    if (flag == 0)
        cout << "Key not found";
}
```

```
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;
    }
}
```

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$\text{ptr}[\text{index}] \rightarrow \text{next} = \text{temp}[\text{index}] \rightarrow \text{next}$

$\text{cout} \ll \text{temp}[\text{index}] \rightarrow \text{data} \ll \text{"has been deleted"};$

$\text{temp}[\text{index}] \rightarrow \text{data} = -1;$

$\text{temp}[\text{index}] = \text{NULL};$

$\text{free}(\text{temp}[\text{index}]);$

}