Data Structures
Hashing

Team Emertxe

EMERTXE

search_hashtable(arr,data)

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Input Specification:

arr :   Pointer that contains address of structure array (hash_t)
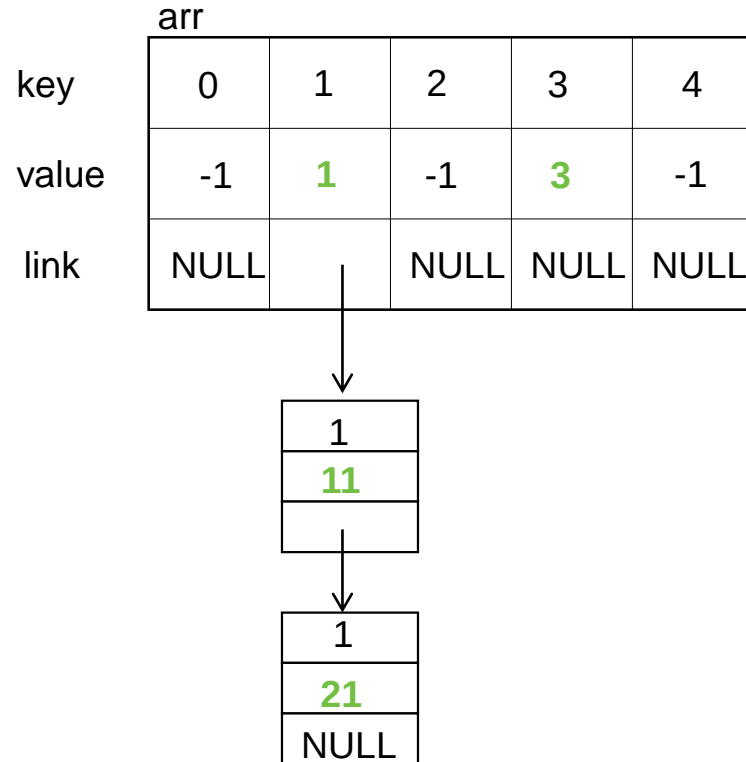
data   : Item to be searched

Output Specification:

Status : DATA_FOUND / DATA_NOT_FOUND

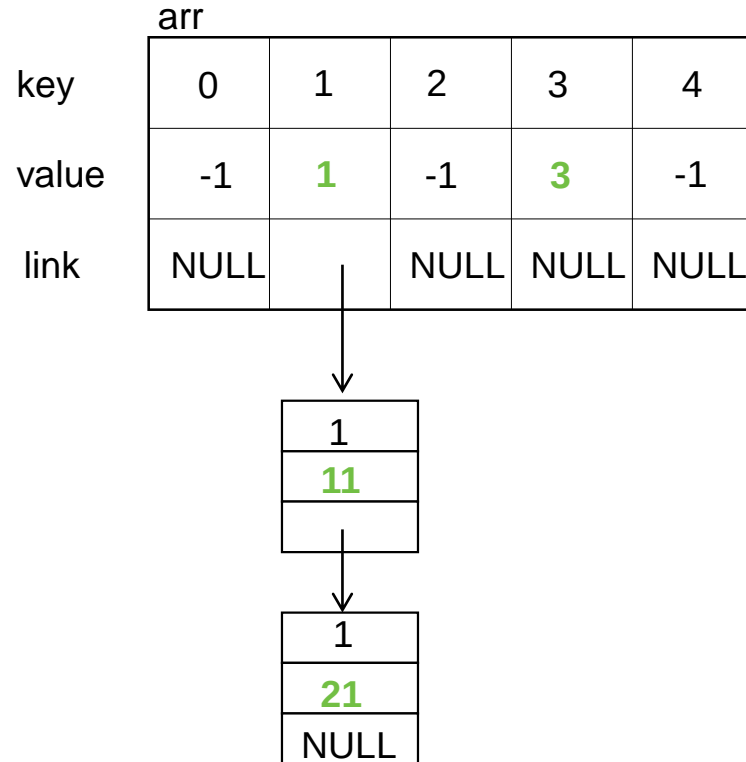ΣMERTXE

search_hashtable(arr,data)

SIZE = 5   data = 3

arr

key	0	1	2	3	4
value	-1	**1**	-1	**3**	-1
link	NULL		NULL	NULL	NULL

1
11

1
21
NULL

ΣMERTXE

search_hashtable(arr,data)

.Algorithm

SIZE = 5   data = 3

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ΣMERTXE
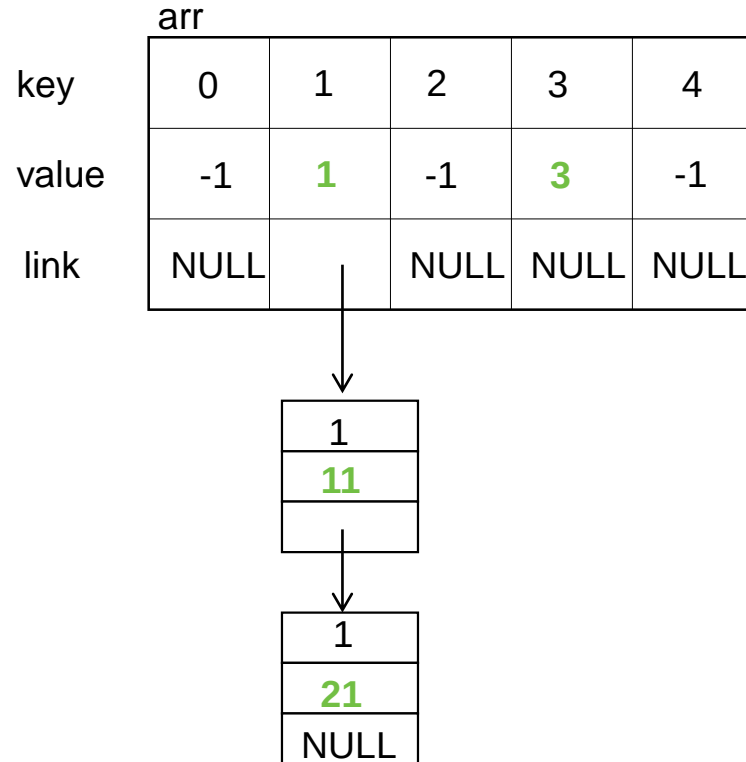
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index = data%SIZE
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temp = arr[index].link
while(temp != NULL )
        if (temp->value = data)
                        return DATA_FOUND
        temp = temp->link
return DATA_NOT_FOUND
```

arr

key	0	1	2	3	4
value	-1	1	-1	3	-1
link	NULL		NULL	NULL	NULL

1
11

1
21
NULL

ΣMERTXE

search_hashtable(arr,data)

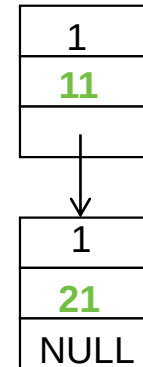SIZE = 5   data = 3

.Algorithm

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index = data%SIZE
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```

arr

key	0	1	2	3	4
value	-1	**1**	-1	**3**	-1
link	NULL		NULL	NULL	NULL

index = 3 % 5 =3

1
11

1
21
NULL

ΣMERTXE

search_hashtable(arr,data)
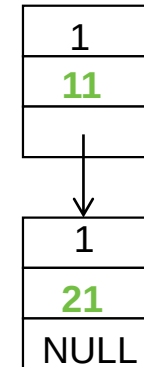
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index = data%SIZE
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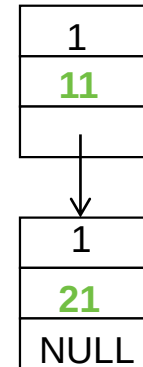SIZE = 5 data = 3

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key	0	1	2	3	4
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1
11

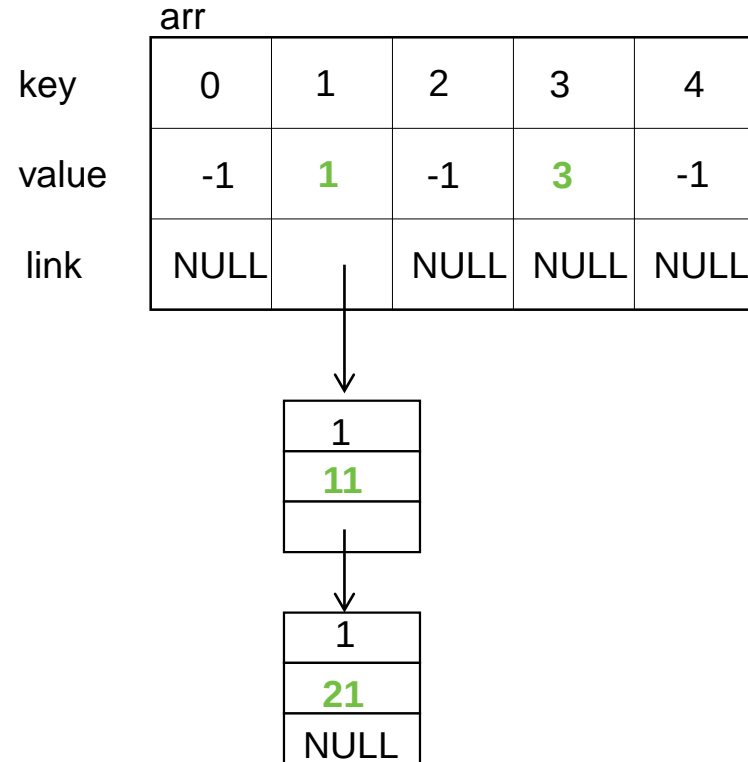| 1 |
|-----|
| **21** |
| NULL |

ΣMERTXE

search_hashtable(arr,data)

SIZE = 5   data = 25

.Algorithm

```
index = data%SIZE
if(arr[index].value = data )
            return DATA_FOUND
temp = arr[index].link
while(temp != NULL )
        if (temp->value = data)
                    return DATA_FOUND
        temp = temp->link
return DATA_NOT_FOUND
```

arr

	0	1	2	3	4
key	0	1	2	3	4
value	-1	1	-1	3	-1
link	NULL		NULL	NULL	NULL

1
11

1
21
NULL

ƩMERTXE

search_hashtable(arr,data)
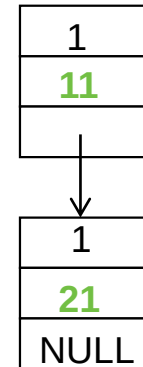
SIZE = 5   data = 25

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arr

key	0	1	2	3	4
value	-1	**1**	-1	**3**	-1
link	NULL		NULL	NULL	NULL

1
11

1
21
NULL

index = 25 % 5 =0

ΣMERTXE

search_hashtable(arr,data)

SIZE = 5   data = 25
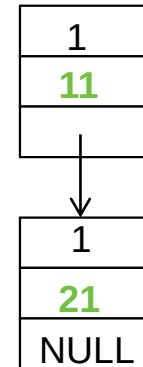
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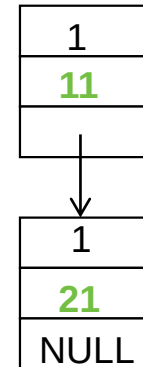
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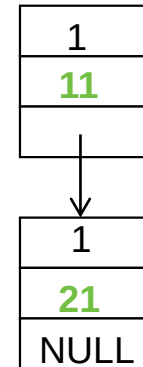
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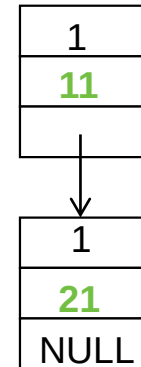SIZE = 5   data = 25

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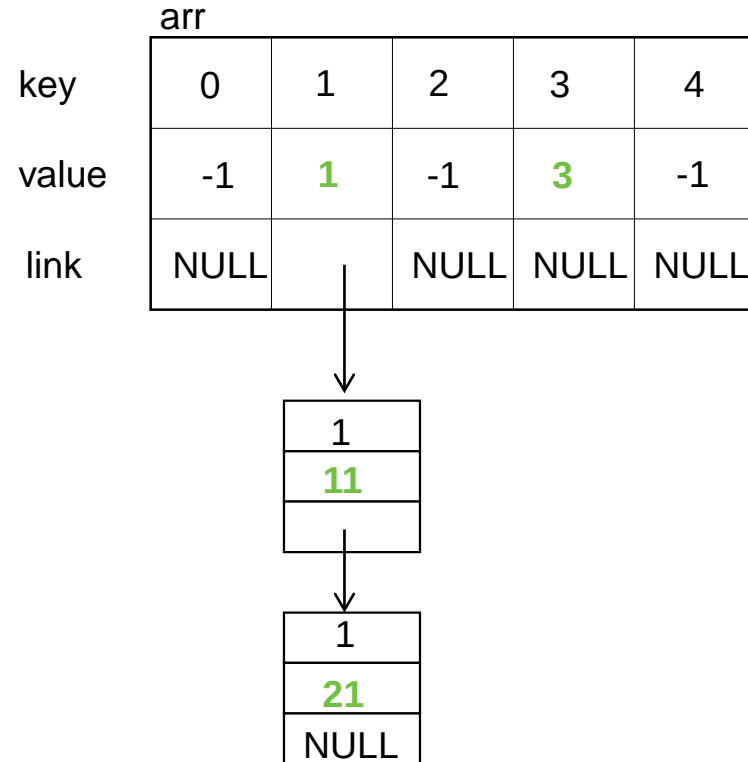EMERTXE

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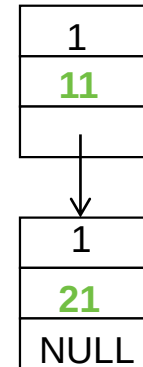ΣMERTXE

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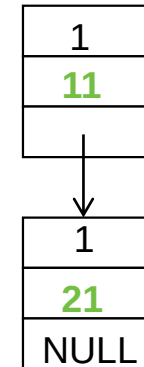
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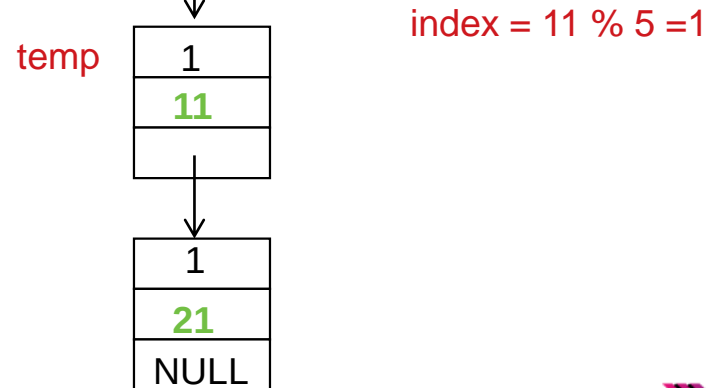
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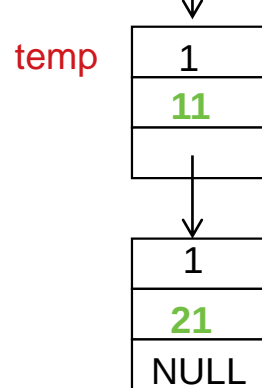
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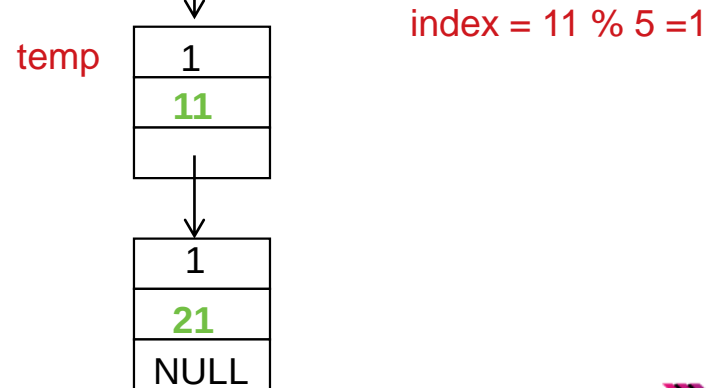
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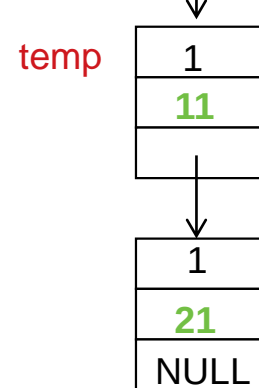
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Code -search_hashtable(arr,data)