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AKSHAY MITTUR
IBM18CS010

classmate

Date _____

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ADS WRITE UP

DICTIONARY USING HASHING

* Insertion Function:

```
void insert (int key) {  
    index = (int) key % 10;  
    ptr[index] = (node *) malloc (sizeof node);  
    ptr[index] → data = key;  
    if (root[index] == NULL) {  
        root[index] = ptr[index];  
        root[index] → next = NULL;  
        temp[index] = ptr;  
    } else {  
        temp[index] = root[index];  
        while (temp[index] → next != NULL)  
            temp[index] = temp[index] → next;  
        temp[index] → next = ptr[index];  
    }  
}
```

```
}  
// Deletion  
void delete (int key) {  
    index = (int) key % 10;  
    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;  
    temp[index] → data = -1;  
    temp[index] = NULL;  
    free (temp[index]);  
}
```

Search Function:

```
void search (int key) {  
    int flag = 0;  
    index = (int) key % max;  
    temp[index] = root[index];  
    while (temp[index] != NULL) {  
        if (temp[index] -> data == key) {  
            flag = 1;  
            break;  
        } else temp[index] = temp[index] -> next;  
    }  
    if (flag == 0) continue;  
}
```