

Experiment No:2.5

Fold Boundry hashing :

```
#include<iostream>

#include<stdio.h>

#include<string.h>

using namespace std;

class boundryhashing
{
    public:
    int a[1000],data,i,j,k,l,temp,temp2,count,loca,ch,divi;
    void choice()
    {
        count=0;
        cout<<"Enter No.s of location"<<endl;
        cin>>loca;

        for(i=0;i<loca;i++)
        {
            a[i]=0;
        }
        temp=loca;
        temp=temp-1;
        while(temp>0)
        {
            temp=temp/10;
            count++;
        }
    }
}
```

```
if(count==1)
{
    divi=10;
}
else{
    if(count==2)
    {
        divi=100;
    }
    else{
        if(count==3)
        {
            divi=1000;
        }
        else{
            if(count==4)
            {
                divi=10000;
            }
            else{
                if(count==5)
                {
                    divi=100000;
                }
            }
        }
    }
}
```

```

        }
    }

    cout<<"You have to divide your value into "<<count<<" parts"<<endl;

    do{

        cout<<"choos what you want to perform"<<endl;

        cout<<"1. Insert"<<"\t"<<"2. Search"<<"\t"<<"3. Display"<<"\t"<<"4. Exit"<<endl;

        cin>>ch;

        switch(ch)
        {

            case 1:

                insert();

                break;

            case 2:

                search();

                break;

            case 3:

                display();

                break;

        }

    }while(ch!=4);

}

void insert()

{

    int temp3,temp4,a2[10];

```

```

for(i=0;i<10;i++)
{
    a2[i]=0;
}
j=0;
cout<<"Enter your data in array"<<endl;
cin>>data;
temp3=data;
while(temp3>divi-1)
{
    a2[j]=temp3%divi;
    j++;
    temp3=temp3/divi;
}

a2[j]=temp3;
for(i=0;i<=j;i++)
{
    cout<<a2[i]<<endl;
}

int temp5=a2[0];
int a3[10],p=0,q=0,y=0,z=0;
int temp6=a2[j];
cout<<a2[0]<<endl;
cout<<temp6<<endl;
if(temp5<10 && temp5>0)
{

```

```

        p=temp5*10;
    }
    else{
        while(temp5>0)
        {
            z=temp5%10;
            p=p*10+z;
            temp5=temp5/10;
        }
    }
    a2[0]=p;
    cout<<"Reverse of first value is "<<p<<endl;
    if(temp6<10 && temp6>0)
    {
        y=temp6*10;
    }
    else
    {
        while(temp6>0)
        {
            q=temp6%10;
            y=y*10+q;
            temp6=temp6/10;
        }
    }
}

```

```

a2[j]=y;
//cout<<"Reverse of first value is "<<p<<endl;
cout<<"Reverse of last value is "<<a2[j]<<endl;

int sum=0;
for(i=0;i<=j;i++)
{

    cout<<a2[i]<<endl;
}

for(i=0;i<=j;i++)
{

    sum=sum+a2[i];
}
cout<<sum<<endl;

int m;
if(sum<loca)
{

    while(a[sum]!=0)
    {

        sum++;

        if(sum>loca-1)
        {

            sum=0;

        }

    }

    if(a[sum]==0)

```

```

        {
            a[sum]=data;
        }

    }
else if(sum>=loca)
{
    while(sum>loca)
    {
        sum=sum/10;
    }
    cout<<sum<<endl;
    if(sum<loca)
    {
        while(a[sum]!=0)
        {
            sum++;
            if(sum>loca-1)
            {
                sum=0;
            }
        }

        if(a[sum]==0)
        {
            a[sum]=data;
        }
    }
}

```

```

        }
    }

}

void search()
{
    int data2;
    cout<<"Enter data you want to search in array"<<endl;
    cin>>data2;
    i=0;
    for(i=0;i<100;i++)
    {

        if(data2==a[i])
        {
            cout<<"data is found at "<<i<<" position"<<endl;
            break;
        }
    }
    if(data2!=a[i])
    {
        cout<<"Data not found"<<endl;
    }
}

void display()
{

```



```

        cout<<"Your array data"<<endl;
        for(i=0;i<loca;i++)
        {
            cout<<a[i]<<endl;
        }
    }
};

int main()
{
    boundryhashing o;

    o.choice();

    return 0;
}

```

/*****Output*****/

```

Enter No.s of location
100
You have to divide your value into 2 parts
choos what you want to perform
1. Insert      2. Search      3. Display      4. Exit
1
Enter your data in array
12345
45
23
1
45
1
Reverse of first value is 54
Reverse of last value is 10
54
23
10
87
choos what you want to perform
1. Insert      2. Search      3. Display      4. Exit
3
Your array data
0
0
0
0
0
0

```

```
0  
0  
0  
0  
0  
0  
0  
0  
0  
0  
0  
0  
0  
0  
0  
12345  
0  
0  
0  
0  
0  
0  
0  
0  
0  
0  
0  
0  
0  
0  
choos what you want to perform  
1. Insert      2. Search      3. Display      4. Exit
```