Modulo Hashing

```cpp
#include<iostream>

#include<stdio.h>

using namespace std;

class A

{

   public:

int a[100],size,i,j,k,temp,temp2;  void

choice()

     {

    cout<<"Enter size of an Array "<<endl;

        cin>>size;    a[size];

    int ch;

for(i=0;i<size;i++)

    {

      a[i]=0;

    }      do

    {

    cout<<"Enter your choice. 1.insertion 2.search 3.display 4.exit"<<endl;

    cin>>ch;

      switch(ch)

      {

        case 1:              insert();

    break;

        case 2:              search();

    break;

        case 3:
```

```cpp
                    display();      break;

                }

            }while(ch!=4);



    } void

    insert()
{
    /*cout<<"how many value you want to enter in and given array"<<endl;

    cin>>j;*/

    cout<<"Enter your data one by one "<<endl;

        cin>>temp;          temp2=temp;

    if(temp2<size)

    {

        while(a[temp2]!=0)

        {

            temp2++;

            if(temp2>size-1)

            {

                temp2=0;

            }

        }

        if(a[temp2]==0)

        {

        a[temp2]=temp;

    }
```

```
        }
                else if(temp2>=size)
    {
      temp2=temp2%10;
                cout<<temp2<<endl;
      while(a[temp2]!=0)
        {
          temp2++;
          if(temp2>size-1)
          {
            temp2=0;
          }
        }


        if(a[temp2]==0)
        {
          a[temp2]=temp;
        }
      }
    }
}
  void search()
  {
    cout<<"Enter value you want to search in an given array"<<endl;
    cin>>k;
    for(i=0;i<size;i++)
  {
    if(a[i]==k)
```

```cpp
        {
        cout<<"Value is found at "<<i<<"th Position"<<endl;

            break;

            }


                }

        if(a[i]!=k)

        {

            cout<<"Value is not found in an given array";

        }

    }

    void display()

    {

        cout<<"Given array is "<<endl;

for(i=0;i<size;i++)        cout<<a[i]<<endl;

        }

};

int main()

{

    A o;

    o.choice();     return

0;

}
```

Output :

Enter size of an Array

3

Enter your choice. 1.insertion 2.search 3.display 4.exit

1

Enter your data one by one

10

0

Enter your choice. 1.insertion 2.search 3.display 4.exit

1

Enter your data one by one

20

0

Enter your choice. 1.insertion 2.search 3.display 4.exit

3

Given array is

10

20

0

Enter your choice. 1.insertion 2.search 3.display 4.exit

2

Enter value you want to search in an given array

20

Value is found at 1th Position

Enter your choice. 1.insertion 2.search 3.display 4.exit