**Practical No: 09**

**Write the program for the following:**

1. **Write a program to implement the collision technique.**

**Code:**

#include<iostream>

#include<conio.h>

using namespace std;

int arr[10]={0,0,0,0,0,0,0,0,0,0};

void insert(int n, int i)

{

if (arr[i]!=0)

{

i=1+i\*i;

insert(n,i);

}

else

{

arr[i]=n;

}

}

int main()

{

char ch;

do

{

int n,i;

cout<<"Enter the element: ";

cin>>n;

i=n%10;

insert(n,i);

cout<<"Do you want to continue? y/n: ";

ch=getche();

cout<<endl;

}

while(ch!='n');

for(int j=0;j<10;j++){

cout<<arr[j]<<"--->";

}

return 0;

}

**Output:**

**……………………………………………………………………………….**

Enter the element: 10

Do you want to continue? y/n: y

Enter the element: 22

Do you want to continue? y/n: y

Enter the element: 43

Do you want to continue? y/n: y

Enter the element: 10

Do you want to continue? y/n: n

10--->10--->22--->43--->0--->0--->0--->0--->0--->0--->

**……………………………………………………………………………**

1. **Write a program to implement concept of linear probing. Hey Cortana,**

**Code:**

#include<iostream>

#include<conio.h>

using namespace std;

int arr[10]={0,0,0,0,0,0,0,0,0,0};

void insert(int n, int i)

{

if (arr[i]!=0)

{

i=(i+1)%10;

insert(n,i);

}

else

{

arr[i]=n;

}

}

int main()

{

char ch;

do

{

int n,i;

cout<<"Enter the element: ";

cin>>n;

i=n%10;

insert(n,i);

cout<<"Do you want to continue? y/n: ";

ch=getche();

cout<<endl;

}

while(ch!='n');

for(int j=0;j<10;j++)

{

cout<<arr[j]<<"--->";

}

return 0;

}

**Output:**

**………………………………………………………………………**

Enter the element: 10

Do you want to continue? y/n: y

Enter the element: 22

Do you want to continue? y/n: y

Enter the element: 43

Do you want to continue? y/n: y

Enter the element: 10

Do you want to continue? y/n: n

10--->10--->22--->43--->0--->0--->0--->0--->0--->0--->

**………………………………………………………………………..**